Search history


```
=> d his full

     (FILE 'HOME' ENTERED AT 14:24:44 ON 28 JUL 2006)

     FILE 'REGISTRY' ENTERED AT 14:24:49 ON 28 JUL 2006
L1        886180 SEA ABB=ON  PLU=ON  (NC4/ESS AND NRS>2 AND N>1 AND (>1 Q/REL))

L2        672553 SEA ABB=ON  PLU=ON  L1 AND NRRS>1
L3               STRUCTURE UPLOADED
L4             1 SEA SUB=L1 SSS SAM L3
                 D SCA
L5           174 SEA SUB=L1 SSS FUL L3
                 SAVE TEMP L5 WAR031STRA/A

     FILE 'HCAPLUS' ENTERED AT 14:36:26 ON 28 JUL 2006
L6            58 SEA ABB=ON  PLU=ON  L5

     FILE 'REGISTRY' ENTERED AT 14:36:35 ON 28 JUL 2006

     FILE 'STNGUIDE' ENTERED AT 14:39:26 ON 28 JUL 2006

     FILE 'REGISTRY' ENTERED AT 14:41:00 ON 28 JUL 2006
L7               STRUCTURE UPLOADED
L8             7 SEA SUB=L5 SSS SAM L7
                 D SCA
L9           106 SEA SUB=L5 SSS FUL L7
L10           68 SEA ABB=ON  PLU=ON  L5 NOT L9

     FILE 'HCAPLUS' ENTERED AT 14:44:53 ON 28 JUL 2006
L11            8 SEA ABB=ON  PLU=ON  L10

     FILE 'REGISTRY' ENTERED AT 14:45:01 ON 28 JUL 2006
                 SAVE TEMP L9 WAR031STRNT1/A

     FILE 'STNGUIDE' ENTERED AT 14:53:21 ON 28 JUL 2006

     FILE 'REGISTRY' ENTERED AT 14:58:12 ON 28 JUL 2006
L12              STRUCTURE UPLOADED
L13            0 SEA SUB=L5 SSS SAM L12
L14            3 SEA SUB=L5 SSS FUL L12
                 SAVE TEMP WAR031STRB/A L14
                 D SCA

     FILE 'HCAPLUS' ENTERED AT 14:59:46 ON 28 JUL 2006
L15            1 SEA ABB=ON  PLU=ON  L14

     FILE 'BEILSTEIN' ENTERED AT 15:00:01 ON 28 JUL 2006

     FILE 'HCAPLUS' ENTERED AT 15:00:12 ON 28 JUL 2006
L16            1 SEA ABB=ON  PLU=ON  L15 AND L11
L17           60 SEA ABB=ON  PLU=ON  BULLINGTON J?/AU
L18         3556 SEA ABB=ON  PLU=ON  FAN X?/AU
L19         1783 SEA ABB=ON  PLU=ON  JACKSON P?/AU
L20        47109 SEA ABB=ON  PLU=ON  ZHANG Y?/AU
L21            3 SEA ABB=ON  PLU=ON  L17 AND (L18 OR L19 OR L20)
L22          138 SEA ABB=ON  PLU=ON  L18 AND (L19 OR L20)
L23            4 SEA ABB=ON  PLU=ON  L19 AND L20
L24          138 SEA ABB=ON  PLU=ON  L18 AND L20
L25            2 SEA ABB=ON  PLU=ON  L18 AND L19
L26            2 SEA ABB=ON  PLU=ON  L24 AND (L17 OR L19)
```

```
     FILE 'BEILSTEIN' ENTERED AT 15:03:41 ON 28 JUL 2006

     FILE 'HCAPLUS' ENTERED AT 15:03:46 ON 28 JUL 2006
L27           6 SEA ABB=ON  PLU=ON  (L21 OR L23 OR L25 OR L26)
L28           1 SEA ABB=ON  PLU=ON  L27 AND (L16 OR L11)
                D SCA

     FILE 'BEILSTEIN' ENTERED AT 15:04:52 ON 28 JUL 2006
L29           0 SEA SSS SAM L3
L30           0 SEA ABB=ON  PLU=ON  (NC4/ESS AND NRS>2 AND N>1 )
L31           0 SEA SSS SAM L12
L32           0 SEA SSS FUL L12

     FILE 'MARPAT' ENTERED AT 15:07:07 ON 28 JUL 2006
L33           0 SEA SSS SAM L12
L34           1 SEA SSS FUL L12
                D SCA

     FILE 'REGISTRY' ENTERED AT 15:08:33 ON 28 JUL 2006

     FILE 'HCAPLUS' ENTERED AT 15:08:36 ON 28 JUL 2006

     FILE 'STNGUIDE' ENTERED AT 15:08:47 ON 28 JUL 2006

     FILE 'REGISTRY' ENTERED AT 15:08:57 ON 28 JUL 2006
                D STAT QUE L5
                D STAT QUE L9
                D STAT QUE L14

     FILE 'HCAPLUS' ENTERED AT 15:09:55 ON 28 JUL 2006
                D QUE NOS L21
                D QUE NOS L23
                D QUE NOS L25
                D QUE NOS L26
                D QUE NOS L28
L35           6 SEA ABB=ON  PLU=ON  L21 OR L23 OR L25 OR L26 OR L28

     FILE 'MEDLINE, EMBASE, BIOSIS' ENTERED AT 15:12:13 ON 28 JUL 2006

     FILE 'STNGUIDE' ENTERED AT 15:12:17 ON 28 JUL 2006

     FILE 'MEDLINE' ENTERED AT 15:12:34 ON 28 JUL 2006
L36           4 SEA ABB=ON  PLU=ON  (L17 AND (L18 OR L19 OR L20)) OR (L19 AND
                ((L17 OR L18) OR L20)) OR (L18 AND L20 AND (L17 OR L19))

     FILE 'EMBASE' ENTERED AT 15:13:54 ON 28 JUL 2006
L37           3 SEA ABB=ON  PLU=ON  (L17 AND (L18 OR L19 OR L20)) OR (L19 AND
                ((L17 OR L18) OR L20)) OR (L18 AND L20 AND (L17 OR L19))

     FILE 'BIOSIS' ENTERED AT 15:14:06 ON 28 JUL 2006
L38           3 SEA ABB=ON  PLU=ON  (L17 AND (L18 OR L19 OR L20)) OR (L19 AND
                ((L17 OR L18) OR L20)) OR (L18 AND L20 AND (L17 OR L19))

     FILE 'WPIX' ENTERED AT 15:14:24 ON 28 JUL 2006
L39           1 SEA ABB=ON  PLU=ON  (L17 AND (L18 OR L19 OR L20)) OR (L19 AND
                ((L17 OR L18) OR L20)) OR (L18 AND L20 AND (L17 OR L19))
L40           0 SEA SSS SAM L3
L41           0 SEA SSS SAM L12
L42           2 SEA SSS FUL L12
```

```
                SEL SDCN
                EDIT E1-E2 /SDCN /DCN
L43           1 SEA ABB=ON  PLU=ON  (RADZT1/DCN OR RADZT3/DCN)
                SEL DCSE L42
                EDIT E3-E4 /DCSE /DCRE
L44           1 SEA ABB=ON  PLU=ON  (888697-0-0-0/DCRE OR 888700-0-0-0/DCRE)
L45           1 SEA ABB=ON  PLU=ON  L42/DCR
L46           1 SEA ABB=ON  PLU=ON  (L43 OR L44 OR L45)
L47           1 SEA ABB=ON  PLU=ON  L39 AND L46

     FILE 'STNGUIDE' ENTERED AT 15:18:30 ON 28 JUL 2006

     FILE 'MEDLINE' ENTERED AT 15:19:08 ON 28 JUL 2006
                D QUE L36

     FILE 'EMBASE' ENTERED AT 15:19:22 ON 28 JUL 2006
                D QUE L37

     FILE 'BIOSIS' ENTERED AT 15:19:34 ON 28 JUL 2006
                D QUE L38

     FILE 'WPIX' ENTERED AT 15:19:47 ON 28 JUL 2006
                D QUE L39
                D QUE L47
L48           1 SEA ABB=ON  PLU=ON  L39 OR L47

     FILE 'STNGUIDE' ENTERED AT 15:20:50 ON 28 JUL 2006

     FILE 'HCAPLUS, MEDLINE, EMBASE, BIOSIS, WPIX' ENTERED AT 15:21:15 ON 28
     JUL 2006
L49           6 DUP REM L35 L36 L37 L38 L48 (11 DUPLICATES REMOVED)
                     ANSWERS '1-6' FROM FILE HCAPLUS
                D IBIB ABS HITSTR L49 1-6

     FILE 'STNGUIDE' ENTERED AT 15:22:05 ON 28 JUL 2006

     FILE 'REGISTRY' ENTERED AT 15:22:17 ON 28 JUL 2006

     FILE 'HCAPLUS' ENTERED AT 15:22:51 ON 28 JUL 2006
                D STAT QUE L16

     FILE 'BEILSTEIN' ENTERED AT 15:23:08 ON 28 JUL 2006
                D STAT QUE L32

     FILE 'MARPAT' ENTERED AT 15:23:32 ON 28 JUL 2006
                D STAT QUE L34

     FILE 'WPIX' ENTERED AT 15:23:45 ON 28 JUL 2006
                D STAT QUE L46

     FILE 'HCAPLUS, MARPAT, WPIX' ENTERED AT 15:24:48 ON 28 JUL 2006
L50           1 DUP REM L16 L32 L34 L46 (2 DUPLICATES REMOVED)
                     ANSWER '1' FROM FILE HCAPLUS
                D IBIB ABS HITSTR L50 1

     FILE 'STNGUIDE' ENTERED AT 15:25:22 ON 28 JUL 2006

     FILE 'HCAPLUS' ENTERED AT 15:25:35 ON 28 JUL 2006

     FILE 'REGISTRY' ENTERED AT 15:25:46 ON 28 JUL 2006
```

```
              D STAT QUE L11
L51          65 SEA ABB=ON  PLU=ON  L11 NOT L16

     FILE 'STNGUIDE' ENTERED AT 15:26:45 ON 28 JUL 2006

     FILE 'HCAPLUS' ENTERED AT 15:26:59 ON 28 JUL 2006
L52           7 SEA ABB=ON  PLU=ON  L11 NOT L16
              D IBIB ABS HITSTR L52 1-7


     FILE HOME

     FILE REGISTRY
     Property values tagged with IC are from the ZIC/VINITI data file
     provided by InfoChem.

     STRUCTURE FILE UPDATES:   27 JUL 2006  HIGHEST RN 896463-29-9
     DICTIONARY FILE UPDATES:  27 JUL 2006  HIGHEST RN 896463-29-9

     New CAS Information Use Policies, enter HELP USAGETERMS for details.

     TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

       Please note that search-term pricing does apply when
       conducting SmartSELECT searches.

     REGISTRY includes numerically searchable data for experimental and
     predicted properties as well as tags indicating availability of
     experimental property data in the original document.  For information
     on property searching in REGISTRY, refer to:

     http://www.cas.org/ONLINE/UG/regprops.html

     FILE HCAPLUS

     Copyright of the articles to which records in this database refer is
     held by the publishers listed in the PUBLISHER (PB) field (available
     for records published or updated in Chemical Abstracts after December
     26, 1996), unless otherwise indicated in the original publications.
     The CA Lexicon is the copyrighted intellectual property of the
     the American Chemical Society and is provided to assist you in searching
     databases on STN.  Any dissemination, distribution, copying, or storing
     of this information, without the prior written consent of CAS, is
     strictly prohibited.

     FILE COVERS 1907 - 28 Jul 2006  VOL 145 ISS 6
     FILE LAST UPDATED: 27 Jul 2006  (20060727/ED)

     New CAS Information Use Policies, enter HELP USAGETERMS for details.

      This file contains CAS Registry Numbers for easy and accurate
      substance identification.

     FILE STNGUIDE
     FILE CONTAINS CURRENT INFORMATION.
     LAST RELOADED: Jul 21, 2006 (20060721/UP).

     FILE BEILSTEIN
     FILE LAST UPDATED ON JUNE 16, 2006
```

FILE COVERS 1771 TO 2006.
FILE CONTAINS 9,606,495 SUBSTANCES

>>>PLEASE NOTE: Reaction Data and substance data are stored in separate documents and can not be searched together in one query. Reaction data for BEILSTEIN compounds may be displayed immediately with the display codes PRE (preparations) and REA (reactions). A substance answer set retrieved after the search for a chemical name, a compounds with available reaction information by combining with PRE/FA, REA/FA or more generally with RX/FA. The BEILSTEIN Registry Number (BRN) is the link between a BEILSTEIN compound and belonging reactions. For mo detailed reaction searches BRNs can be searched as reaction partner BRNs Reactant BRN (RX.RBRN) or Product BRN (RX.PBRN).<<<

>>> FOR SEARCHING PREPARATIONS SEE HELP PRE <<<

****
* PLEASE NOTE THAT THERE ARE NO FORMATS FREE OF COST. *
* SET NOTICE FEATURE: THE COST ESTIMATES CALCULATED FOR SET NOTICE *
* ARE BASED ON THE HIGHEST PRICE CATEGORY. THEREFORE; THESE *
* ESTIMATES MAY NOT REFLECT THE ACTUAL COSTS. *
* FOR PRICE INFORMATION SEE HELP COST *
****

NEW

*** PATENT NUMBERS (PN) AND BABS ACCESSION NUMBERS (BABSAN) CAN NOW BE SEARCHED, SELECTED AND TRANSFERRED.**
*** NEW DISPLAY FORMATS ALLREF, ALLP AND BABSAN SHOW ALL REFERENCES, ALL PATENT REFERENCES, OR ALL BABS ACCESSION NUMBERS FOR A COMPOUND AT A GLANCE.**

FILE MARPAT
FILE CONTENT: 1961-PRESENT VOL 144 ISS 26 (20060721/ED)

SOME MARPAT RECORDS ARE DERIVED FROM INPI DATA FOR 1961-1987

MOST RECENT CITATIONS FOR PATENTS FROM MAJOR ISSUING AGENCIES
(COVERAGE TO THESE DATES IS NOT COMPLETE):

US 2006118302 08 JUN 2006
DE 102004054303 11 MAY 2006
EP 1657292 17 MAY 2006
JP 2006120460 11 MAY 2006
WO 2006053912 26 MAY 2006
GB 2419594 03 MAY 2006
FR 2877567 12 MAY 2006
RU 2275374 27 APR 2006
CA 2518664 10 MAR 2006

Expanded G-group definition display now available.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

FILE MEDLINE
FILE LAST UPDATED: 27 Jul 2006 (20060727/UP). FILE COVERS 1950 TO DATE.

On December 11, 2005, the 2006 MeSH terms were loaded.

The MEDLINE reload for 2006 is now (26 Feb.) available. For details

on the 2006 reload, enter HELP RLOAD at an arrow prompt (=>).
See also:

http://www.nlm.nih.gov/mesh/
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html

OLDMEDLINE is covered back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2006 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE EMBASE
FILE COVERS 1974 TO 28 Jul 2006 (20060728/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

EMBASE is now updated daily. SDI frequency remains weekly (default) and biweekly.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE BIOSIS
FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 26 July 2006 (20060726/ED)

FILE WPIX
FILE LAST UPDATED: 24 JUL 2006 <20060724/UP>
MOST RECENT DERWENT UPDATE: 200647 <200647/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE, PLEASE VISIT:
http://www.stn-international.de/training_center/patents/stn_guide.pdf <

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
http://scientific.thomson.com/support/patents/coverage/latestupdates/

>>> PLEASE BE AWARE OF THE NEW IPC REFORM IN 2006, SEE
http://www.stn-international.de/stndatabases/details/ipc_reform.html and
http://scientific.thomson.com/media/scpdf/ipcrdwpi.pdf <<<

>>> FOR FURTHER DETAILS ON THE FORTHCOMING DERWENT WORLD PATENTS INDEX ENHANCEMENTS PLEASE VISIT:
http://www.stn-international.de/stndatabases/details/dwpi_r.html <<<

=>

```
=> file registry
FILE 'REGISTRY' ENTERED AT 15:08:57 ON 28 JUL 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2006 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:   27 JUL 2006  HIGHEST RN 896463-29-9
DICTIONARY FILE UPDATES:  27 JUL 2006  HIGHEST RN 896463-29-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=> d stat que L5
L1       886180 SEA FILE=REGISTRY ABB=ON  PLU=ON  (NC4/ESS AND NRS>2 AND N>1
                AND (>1 Q/REL))
L3               STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L5          174 SEA FILE=REGISTRY SUB=L1 SSS FUL L3

100.0% PROCESSED  886160 ITERATIONS                      174 ANSWERS
SEARCH TIME: 00.00.15



=> d stat que L9
L1       886180 SEA FILE=REGISTRY ABB=ON  PLU=ON  (NC4/ESS AND NRS>2 AND N>1
                AND (>1 Q/REL))
L3               STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L5          174 SEA FILE=REGISTRY SUB=L1 SSS FUL L3
L7               STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L9          106 SEA FILE=REGISTRY SUB=L5 SSS FUL L7

100.0% PROCESSED     174 ITERATIONS                      106 ANSWERS
SEARCH TIME: 00.00.02
```

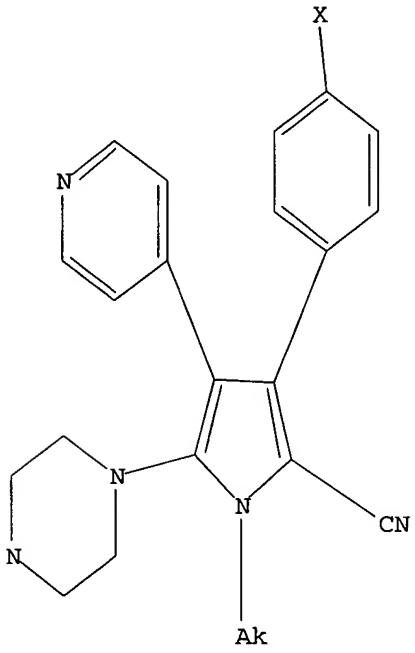
STRUCTURE QUERY(S)

← "NOT" structure

```
=> d stat que L14
L1        886180 SEA FILE=REGISTRY ABB=ON  PLU=ON  (NC4/ESS AND NRS>2 AND N>1
                 AND (>1 Q/REL))
L3               STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L5           174 SEA FILE=REGISTRY SUB=L1 SSS FUL L3
L12              STR
```




```
Structure attributes must be viewed using STN Express query preparation.
L14            3 SEA FILE=REGISTRY SUB=L5 SSS FUL L12

100.0% PROCESSED       9 ITERATIONS                     3 ANSWERS
SEARCH TIME: 00.00.01


=> file hcaplus
FILE 'HCAPLUS' ENTERED AT 15:09:55 ON 28 JUL 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)
```

narrow structure

AUTHOR SEARCH

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FILE COVERS 1907 - 28 Jul 2006 VOL 145 ISS 6
FILE LAST UPDATED: 27 Jul 2006 (20060727/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.
'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

```
=> d que nos L21
L17          60 SEA FILE=HCAPLUS ABB=ON  PLU=ON  BULLINGTON J?/AU
L18        3556 SEA FILE=HCAPLUS ABB=ON  PLU=ON  FAN X?/AU
L19        1783 SEA FILE=HCAPLUS ABB=ON  PLU=ON  JACKSON P?/AU
L20       47109 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ZHANG Y?/AU
L21           3 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L17 AND (L18 OR L19 OR L20)


=> d que nos L23
L19        1783 SEA FILE=HCAPLUS ABB=ON  PLU=ON  JACKSON P?/AU
L20       47109 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ZHANG Y?/AU
L23           4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L19 AND L20


=> d que nos L25
L18        3556 SEA FILE=HCAPLUS ABB=ON  PLU=ON  FAN X?/AU
L19        1783 SEA FILE=HCAPLUS ABB=ON  PLU=ON  JACKSON P?/AU
L25           2 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L18 AND L19


=> d que nos L26
L17          60 SEA FILE=HCAPLUS ABB=ON  PLU=ON  BULLINGTON J?/AU
L18        3556 SEA FILE=HCAPLUS ABB=ON  PLU=ON  FAN X?/AU
L19        1783 SEA FILE=HCAPLUS ABB=ON  PLU=ON  JACKSON P?/AU
L20       47109 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ZHANG Y?/AU
L24         138 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L18 AND L20
L26           2 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L24 AND (L17 OR L19)


=> d que nos L28
L1        886180 SEA FILE=REGISTRY ABB=ON  PLU=ON  (NC4/ESS AND NRS>2 AND N>1
                 AND (>1 Q/REL))
L3               STR
L5           174 SEA FILE=REGISTRY SUB=L1 SSS FUL L3
L7               STR
L9           106 SEA FILE=REGISTRY SUB=L5 SSS FUL L7
L10           68 SEA FILE=REGISTRY ABB=ON  PLU=ON  L5 NOT L9
L11            8 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L10
L12              STR
L14            3 SEA FILE=REGISTRY SUB=L5 SSS FUL L12
L15            1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14
L16            1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L15 AND L11
L17           60 SEA FILE=HCAPLUS ABB=ON  PLU=ON  BULLINGTON J?/AU
L18         3556 SEA FILE=HCAPLUS ABB=ON  PLU=ON  FAN X?/AU
L19         1783 SEA FILE=HCAPLUS ABB=ON  PLU=ON  JACKSON P?/AU
L20        47109 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ZHANG Y?/AU
L21            3 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L17 AND (L18 OR L19 OR L20)
```

```
L23           4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L19 AND L20
L24         138 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L18 AND L20
L25           2 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L18 AND L19
L26           2 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L24 AND (L17 OR L19)
L27           6 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L21 OR L23 OR L25 OR L26)
L28           1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L27 AND (L16 OR L11)


=> s L21 or L23 or L25 or L26 or L28
L35           6 L21 OR L23 OR L25 OR L26 OR L28

=> => file medline
FILE 'MEDLINE' ENTERED AT 15:19:08 ON 28 JUL 2006

 FILE LAST UPDATED: 27 Jul 2006 (20060727/UP).  FILE COVERS 1950 TO DATE.

 On December 11, 2005, the 2006 MeSH terms were loaded.

 The MEDLINE reload for 2006 is now (26 Feb.) available.  For details
 on the 2006 reload, enter HELP RLOAD at an arrow prompt (=>).
 See also:

    http://www.nlm.nih.gov/mesh/
    http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html
    http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.html
    http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html

 OLDMEDLINE is covered back to 1950.

 MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
 MeSH 2006 vocabulary.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=> d que L36
L17          60 SEA FILE=HCAPLUS ABB=ON  PLU=ON  BULLINGTON J?/AU
L18        3556 SEA FILE=HCAPLUS ABB=ON  PLU=ON  FAN X?/AU
L19        1783 SEA FILE=HCAPLUS ABB=ON  PLU=ON  JACKSON P?/AU
L20       47109 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ZHANG Y?/AU
L36           4 SEA FILE=MEDLINE ABB=ON  PLU=ON  (L17 AND (L18 OR L19 OR L20))
                OR (L19 AND ((L17 OR L18) OR L20)) OR (L18 AND L20 AND (L17 OR
                L19))


=> file embase
FILE 'EMBASE' ENTERED AT 15:19:22 ON 28 JUL 2006
Copyright (c) 2006 Elsevier B.V. All rights reserved.

 FILE COVERS 1974 TO 28 Jul 2006 (20060728/ED)

 EMBASE has been reloaded. Enter HELP RLOAD for details.

 EMBASE is now updated daily.  SDI frequency remains weekly (default)
 and biweekly.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=> d que L37
```

```
L17          60 SEA FILE=HCAPLUS ABB=ON  PLU=ON  BULLINGTON J?/AU
L18        3556 SEA FILE=HCAPLUS ABB=ON  PLU=ON  FAN X?/AU
L19        1783 SEA FILE=HCAPLUS ABB=ON  PLU=ON  JACKSON P?/AU
L20       47109 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ZHANG Y?/AU
L37           3 SEA FILE=EMBASE ABB=ON  PLU=ON  (L17 AND (L18 OR L19 OR L20))
                OR (L19 AND ((L17 OR L18) OR L20)) OR (L18 AND L20 AND (L17 OR
                L19))


=> file biosis
FILE 'BIOSIS' ENTERED AT 15:19:34 ON 28 JUL 2006
Copyright (c) 2006 The Thomson Corporation

FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 26 July 2006 (20060726/ED)


=> d que L38
L17          60 SEA FILE=HCAPLUS ABB=ON  PLU=ON  BULLINGTON J?/AU
L18        3556 SEA FILE=HCAPLUS ABB=ON  PLU=ON  FAN X?/AU
L19        1783 SEA FILE=HCAPLUS ABB=ON  PLU=ON  JACKSON P?/AU
L20       47109 SEA FILE=HCAPLUS ABB=ON  PLU=ON  ZHANG Y?/AU
L38           3 SEA FILE=BIOSIS ABB=ON  PLU=ON  (L17 AND (L18 OR L19 OR L20))
                OR (L19 AND ((L17 OR L18) OR L20)) OR (L18 AND L20 AND (L17 OR
                L19))


=> file wpix
FILE 'WPIX' ENTERED AT 15:19:47 ON 28 JUL 2006
COPYRIGHT (C) 2006 THE THOMSON CORPORATION

FILE LAST UPDATED:          24 JUL 2006      <20060724/UP>
MOST RECENT DERWENT UPDATE:     200647        <200647/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,
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 http://www.stn-international.de/training_center/patents/stn_guide.pdf <

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
http://scientific.thomson.com/support/patents/coverage/latestupdates/

>>> PLEASE BE AWARE OF THE NEW IPC REFORM IN 2006, SEE
http://www.stn-international.de/stndatabases/details/ipc_reform.html and
http://scientific.thomson.com/media/scpdf/ipcrdwpi.pdf <<<

>>> FOR FURTHER DETAILS ON THE FORTHCOMING DERWENT WORLD PATENTS
    INDEX ENHANCEMENTS PLEASE VISIT:
http://www.stn-international.de/stndatabases/details/dwpi_r.html <<<
'BIX' IS DEFAULT SEARCH FIELD FOR 'WPIX' FILE

=> d que L39
L17          60 SEA FILE=HCAPLUS ABB=ON  PLU=ON  BULLINGTON J?/AU
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L39           1 SEA FILE=WPIX ABB=ON  PLU=ON  (L17 AND (L18 OR L19 OR L20)) OR
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(L19 AND ((L17 OR L18) OR L20)) OR (L18 AND L20 AND (L17 OR L19))

=> d que L47
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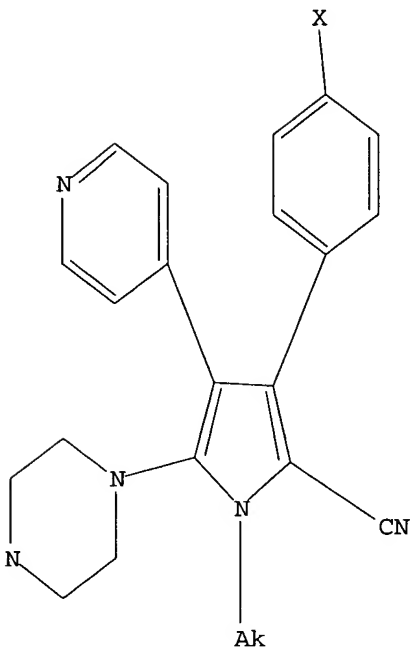

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L20 47109 SEA FILE=HCAPLUS ABB=ON PLU=ON ZHANG Y?/AU
L39 1 SEA FILE=WPIX ABB=ON PLU=ON (L17 AND (L18 OR L19 OR L20)) OR (L19 AND ((L17 OR L18) OR L20)) OR (L18 AND L20 AND (L17 OR L19))
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L44 1 SEA FILE=WPIX ABB=ON PLU=ON (888697-0-0-0/DCRE OR 888700-0-0-0/DCRE)
L45 1 SEA FILE=WPIX ABB=ON PLU=ON L42/DCR
L46 1 SEA FILE=WPIX ABB=ON PLU=ON (L43 OR L44 OR L45)
L47 1 SEA FILE=WPIX ABB=ON PLU=ON L39 AND L46

=> s L39 or L47
L48 1 L39 OR L47

=> => dup rem L35 L36 L37 L38 L48
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USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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PROCESSING COMPLETED FOR L35
PROCESSING COMPLETED FOR L36
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L49 ANSWER 1 OF 6 HCAPLUS DUPLICATE 1
ACCESSION NUMBER: 2006:453871 HCAPLUS
TITLE: Synthesis and SAR of α-sulfonylcarboxylic acids as potent matrix metalloproteinase inhibitors
AUTHOR(S): **Zhang, Yue-Mei**; **Fan, Xiaodong**; Xiang, Bangping; Chakravarty, Devraj; Scannevin, Robert; Burke, Sharon; Karnachi, Prabha; Rhodes, Kenneth; **Jackson, Paul**
CORPORATE SOURCE: Drug Discovery, Johnson & Johnson Pharmaceutical Research and Development, Raritan, NJ, 08869, USA
SOURCE: Bioorganic & Medicinal Chemistry Letters (2006), 16(12), 3096-3100
CODEN: BMCLE8; ISSN: 0960-894X
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A series of novel carboxylic acid-based α-sulfone MMP inhibitors have been synthesized and the in vitro enzyme SAR is discussed. A potential binding mode in the active site of the MMP-9 homol. model was highlighted. These compds. are potent MMP-9 inhibitors and are selective over MMP-1.
REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L49 ANSWER 2 OF 6 HCAPLUS DUPLICATE 2
ACCESSION NUMBER: 2004:292020 HCAPLUS
DOCUMENT NUMBER: 140:321233
TITLE: A preparation of pyrrole derivatives useful for the treatment of disorders ameliorated by reduction of TNF-α production and/or p38 activity
INVENTOR(S): **Bullington, James L.**; **Fan, Xiaodong**; **Jackson, Paul F.**; **Zhang, Yue-mei**
PATENT ASSIGNEE(S): Janssen Pharmaceutica N.V., Belg.
SOURCE: PCT Int. Appl., 116 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2004029040	A1	20040408	WO 2003-US30223		20030924
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AU 2003278927	A1	20040419	AU 2003-278927		20030924
US 2005043331	A1	20050224	US 2003-670031		20030924
EP 1549635	A1	20050706	EP 2003-770442		20030924
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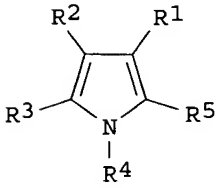
BR 2003014783	A	20050726	BR 2003-14783		20030924
CN 1701069	A	20051123	CN 2003-825319		20030924
JP 2006511479	T2	20060406	JP 2004-539896		20030924
NO 2005001967	A	20050621	NO 2005-1967		20050422
PRIORITY APPLN. INFO.:			US 2002-414436P	P	20020927
			WO 2003-US30223	W	20030924

OTHER SOURCE(S): MARPAT 140:321233

GI



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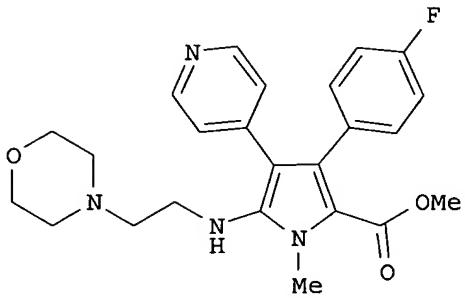

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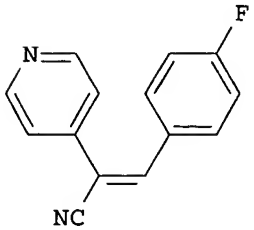

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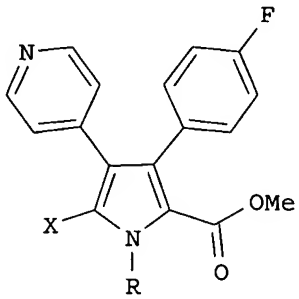


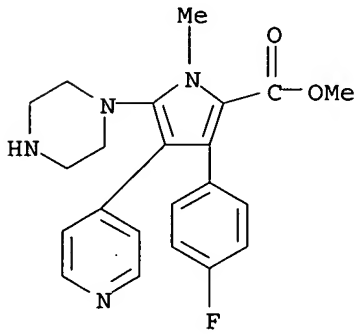
IV

AB The invention relates to 3-pyridyl-4-arylpyrrole derivs. of formula I [wherein: R1 and R2 are independently selected from (un)substituted (hetero)aryl; R3 = H, (un)substituted alkyl, -N:CR6-, -C(O)R7, etc.; R4 = H, (un)substituted alkyl, (un)substituted (hetero)aryl, etc.; R5 =

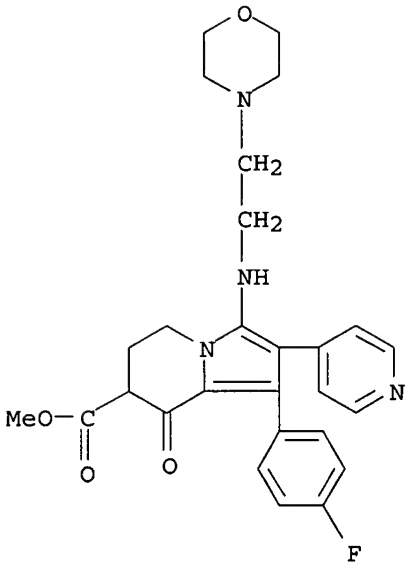
(un)substituted alkyl, C(O)OR7, C(O)R7, CN, NO2, halo, etc.; R6 and R7 are independently selected from H, (un)substituted alkyl, (un)substituted aryl, (un)substituted heterocycle; with provisos], and pharmaceutical compns. comprising the same, useful for treating disorders ameliorated by reducing TNF-α production and/or p38 activity in appropriate cells. The invention compds. I were screened for p38 inhibition (in-vitro enzyme assays) and TNF-α inhibition (in-vitro whole cell assays and in vivo rodent assay). The invention also provides therapeutic and prophylactic methods using the instant pharmaceutical compns. For instance, pyrrole derivative II (compound 5; mouse 10 mg/kg, 0.5 h, 44% inhibition of TNF-α production) was prepared via condensation of 4-fluorobenzaldehyde with 4-pyridylacetonitrile, heterocyclization of the obtained pyridine derivative III with Me isocyanoacetate, N-methylation of the pyrrole ring of the obtained pyrrolecarboxylate derivative IV (X = H, R = H), bromination of the pyrrolecarboxylate derivative IV (X = H, R = Me), and subsequent amination of the obtained bromopyrrole derivative IV (X = Br, R = Me) by 4-(2-aminoethyl)morpholine.

IT **678161-35-8P 678161-52-9P**
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(intermediate; preparation of pyridyl(aryl)pyrrole derivs. useful for the treatment of disorders ameliorated by reduction of TNF-α production and/or p38 activity)

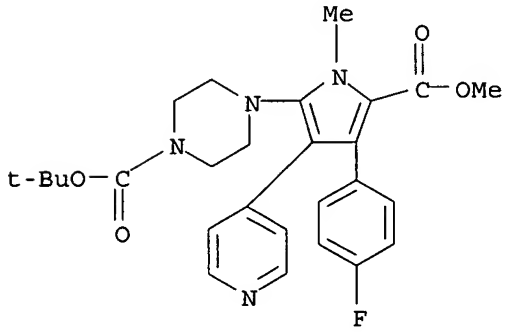
RN 678161-35-8 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 3-(4-fluorophenyl)-1-methyl-5-(1-piperazinyl)-4-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)



RN 678161-52-9 HCAPLUS
CN 7-Indolizinecarboxylic acid, 1-(4-fluorophenyl)-5,6,7,8-tetrahydro-3-[[2-(4-morpholinyl)ethyl]amino]-8-oxo-2-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)



IT **678161-34-7**
RL: PAC (Pharmacological activity); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(preparation of pyridyl(aryl)pyrrole derivs. useful for the treatment of disorders ameliorated by reduction of TNF-α production and/or p38 activity)
RN 678161-34-7 HCAPLUS
CN 1-Piperazinecarboxylic acid, 4-[4-(4-fluorophenyl)-5-(methoxycarbonyl)-1-methyl-3-(4-pyridinyl)-1H-pyrrol-2-yl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



IT **678161-38-1P 678161-40-5P 678161-41-6P**
678161-42-7P 678161-54-1P 678162-27-1P
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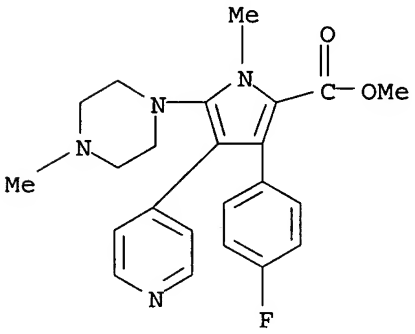
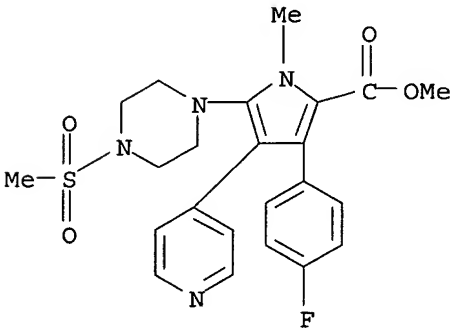
678162-36-2P 678162-37-3P 678162-39-5P
678162-41-9P 678162-43-1P 678162-45-3P
678162-46-4P 678162-47-5P 678162-50-0P
678162-51-1P 678162-52-2P 678162-53-3P
678162-61-3P 678162-62-4P 678162-69-1P
678162-70-4P 678162-71-5P 678162-72-6P
678162-73-7P 678162-75-9P 678162-93-1P
678162-99-7P 678163-05-8P 678163-25-2P

678163-26-3P 678163-28-5P 678163-29-6P
678163-30-9P 678163-33-2P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of pyridyl(aryl)pyrrole derivs. useful for the treatment of disorders ameliorated by reduction of TNF-α production and/or p38 activity)

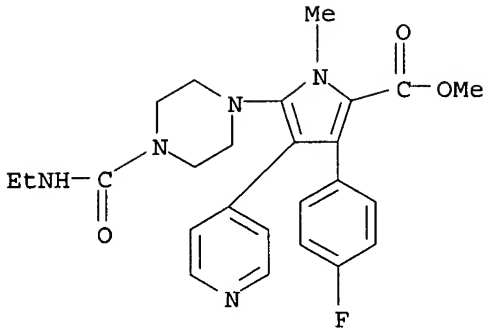
RN 678161-38-1 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 3-(4-fluorophenyl)-1-methyl-5-(4-methyl-1-piperazinyl)-4-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)



RN 678161-40-5 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 3-(4-fluorophenyl)-1-methyl-5-[4-(methylsulfonyl)-1-piperazinyl]-4-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)



RN 678161-41-6 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 5-[4-[(ethylamino)carbonyl]-1-piperazinyl]-3-(4-fluorophenyl)-1-methyl-4-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)



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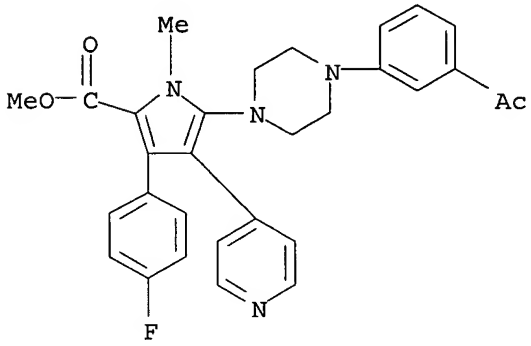
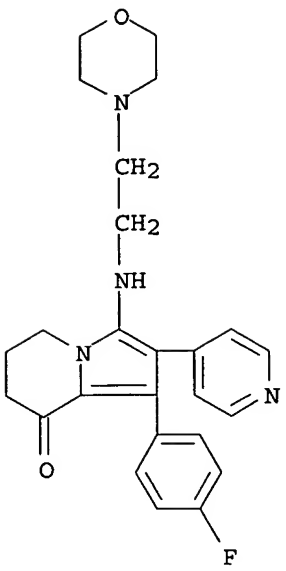
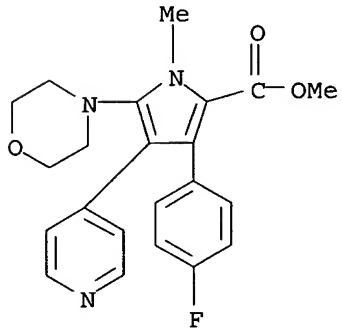
CN 1H-Pyrrole-2-carboxylic acid, 5-[4-(3-acetylphenyl)-1-piperazinyl]-3-(4-fluorophenyl)-1-methyl-4-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)



RN 678161-54-1 HCAPLUS
CN 8(5H)-Indolizinone, 1-(4-fluorophenyl)-6,7-dihydro-3-[[2-(4-morpholinyl)ethyl]amino]-2-(4-pyridinyl)- (9CI) (CA INDEX NAME)



RN 678162-27-1 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 3-(4-fluorophenyl)-1-methyl-5-(4-morpholinyl)-4-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)



RN 678162-29-3 HCAPLUS
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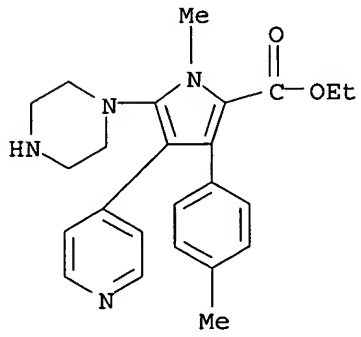
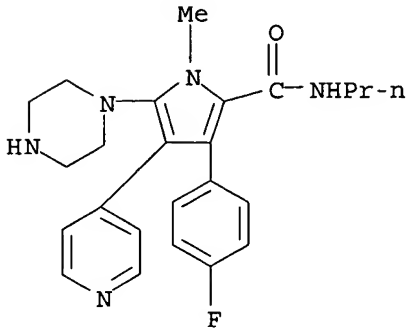


RN 678162-34-0 HCAPLUS
CN 1H-Pyrrole-2-carboxamide, 3-(4-fluorophenyl)-1-methyl-5-(1-piperazinyl)-N-propyl-4-(4-pyridinyl)- (9CI) (CA INDEX NAME)



RN 678162-35-1 HCAPLUS
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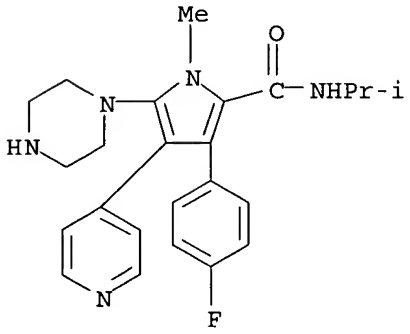
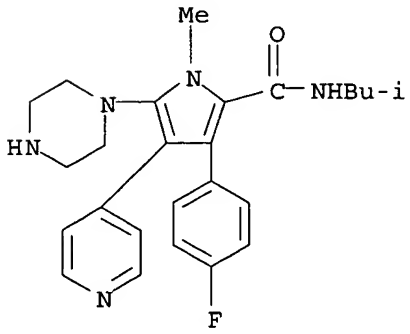
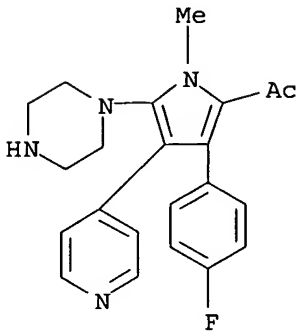


RN 678162-36-2 HCAPLUS
CN 1H-Pyrrole-2-carboxamide, 3-(4-fluorophenyl)-1-methyl-N-(2-methylpropyl)-5-(1-piperazinyl)-4-(4-pyridinyl)- (9CI) (CA INDEX NAME)



RN 678162-37-3 HCAPLUS
CN Ethanone, 1-[3-(4-fluorophenyl)-1-methyl-5-(1-piperazinyl)-4-(4-pyridinyl)-

1H-pyrrol-2-yl]- (9CI) (CA INDEX NAME)



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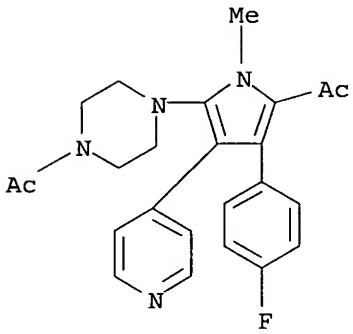

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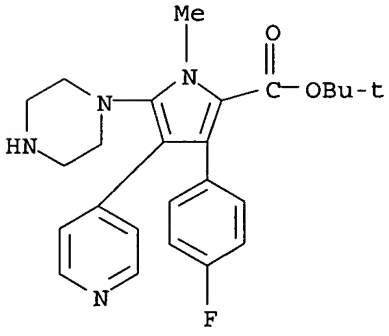

RN 678162-43-1 HCAPLUS
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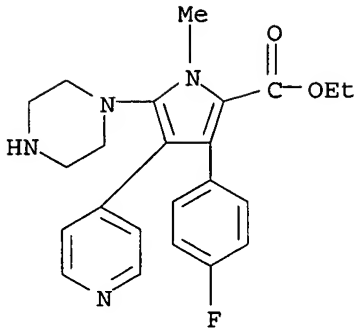

RN 678162-45-3 HCAPLUS
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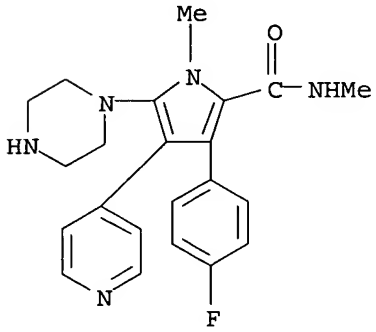
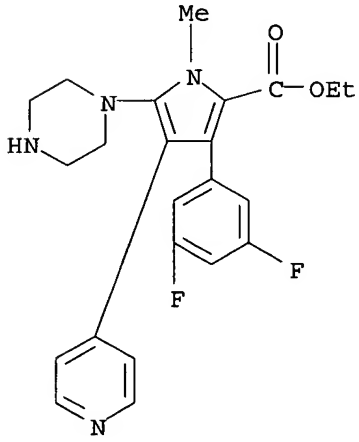
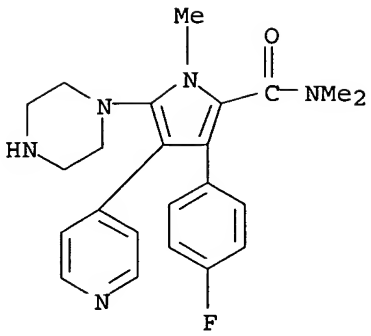


RN 678162-46-4 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 3-(3,5-difluorophenyl)-1-methyl-5-(1-piperazinyl)-4-(4-pyridinyl)-, ethyl ester (9CI) (CA INDEX NAME)

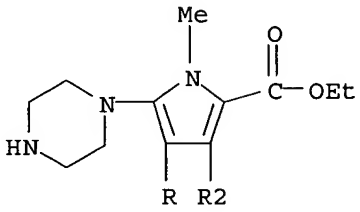


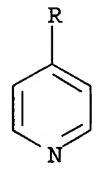
RN 678162-47-5 HCAPLUS
CN 1H-Pyrrole-2-carboxamide, 3-(4-fluorophenyl)-N,N,1-trimethyl-5-(1-piperazinyl)-4-(4-pyridinyl)- (9CI) (CA INDEX NAME)



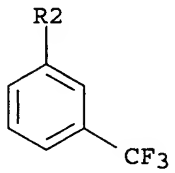
RN 678162-50-0 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 1-methyl-5-(1-piperazinyl)-4-(4-pyridinyl)-3-[3-(trifluoromethyl)phenyl]-, ethyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



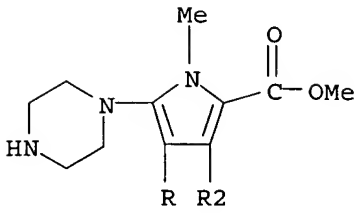


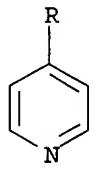
PAGE 2-A



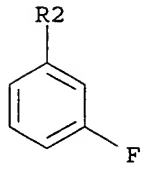
RN 678162-51-1 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 3-(3-fluorophenyl)-1-methyl-5-(1-piperazinyl)-4-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)

PAGE 1-A

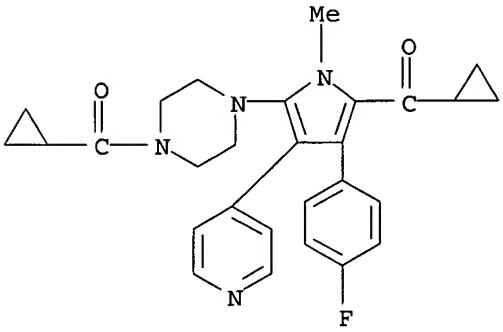




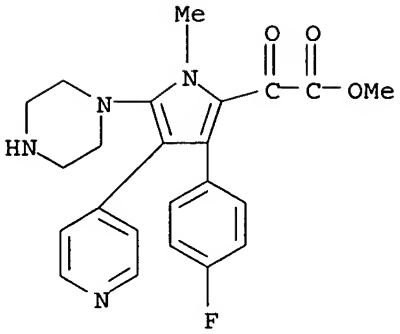
PAGE 2-A



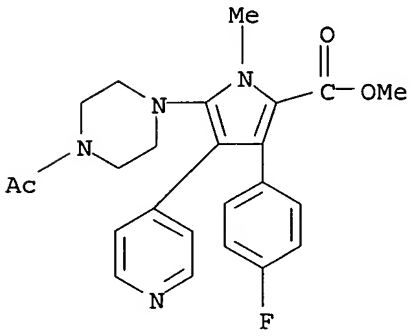
RN 678162-52-2 HCAPLUS
CN Piperazine, 1-(cyclopropylcarbonyl)-4-[5-(cyclopropylcarbonyl)-4-(4-fluorophenyl)-1-methyl-3-(4-pyridinyl)-1H-pyrrol-2-yl]- (9CI) (CA INDEX NAME)



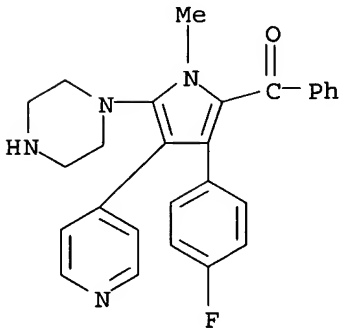
RN 678162-53-3 HCAPLUS
CN 1H-Pyrrole-2-acetic acid, 3-(4-fluorophenyl)-1-methyl-α-oxo-5-(1-piperazinyl)-4-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)



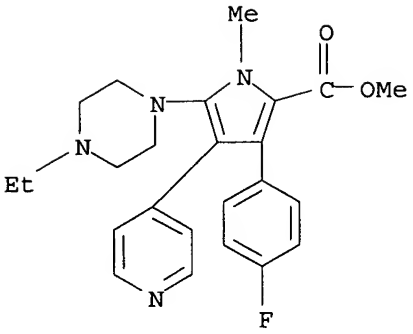
RN 678162-61-3 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 5-(4-acetyl-1-piperazinyl)-3-(4-fluorophenyl)-1-methyl-4-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)



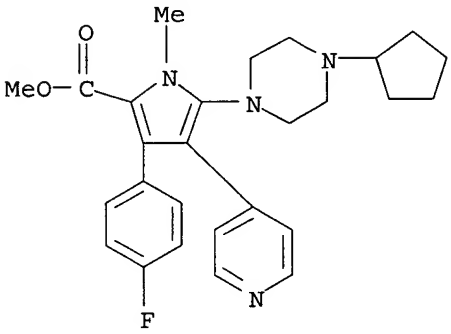
RN 678162-62-4 HCAPLUS
CN Methanone, [3-(4-fluorophenyl)-1-methyl-5-(1-piperazinyl)-4-(4-pyridinyl)-1H-pyrrol-2-yl]phenyl- (9CI) (CA INDEX NAME)



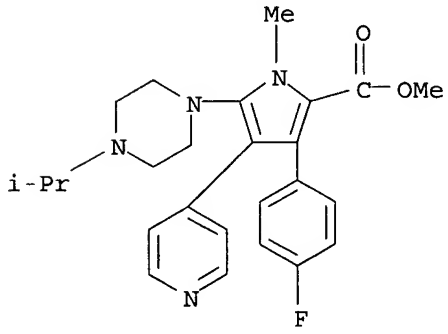
RN 678162-69-1 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 5-(4-ethyl-1-piperazinyl)-3-(4-fluorophenyl)-1-methyl-4-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)



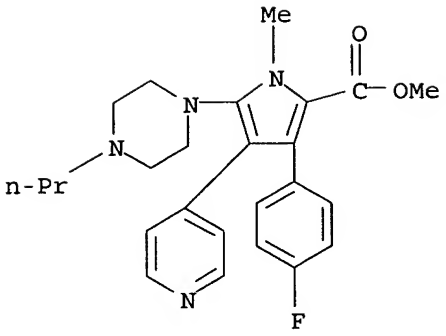
RN 678162-70-4 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 5-(4-cyclopentyl-1-piperazinyl)-3-(4-fluorophenyl)-1-methyl-4-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)



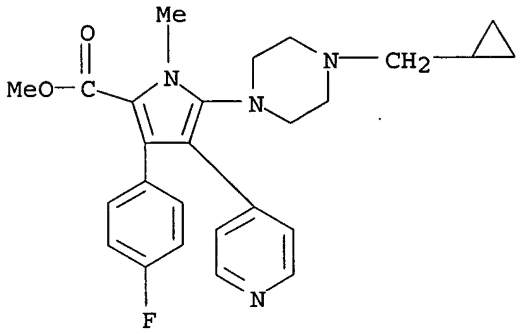
RN 678162-71-5 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 3-(4-fluorophenyl)-1-methyl-5-[4-(1-methylethyl)-1-piperazinyl]-4-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)



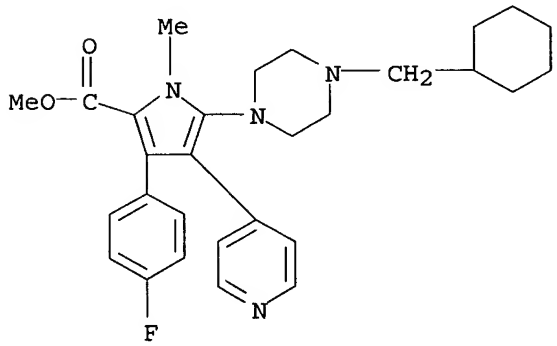
RN 678162-72-6 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 3-(4-fluorophenyl)-1-methyl-5-(4-propyl-1-piperazinyl)-4-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)



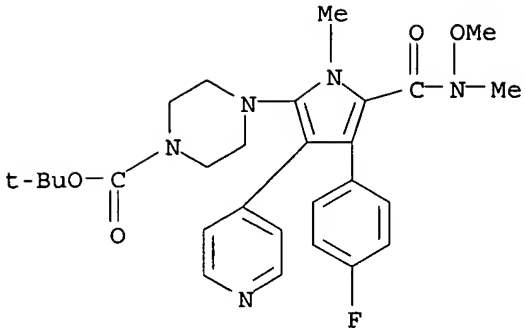
RN 678162-73-7 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 5-[4-(cyclopropylmethyl)-1-piperazinyl]-3-(4-fluorophenyl)-1-methyl-4-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)



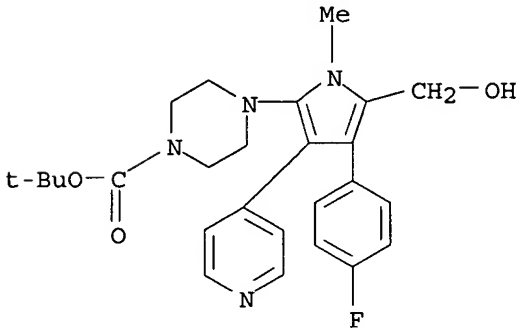
RN 678162-75-9 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 5-[4-(cyclohexylmethyl)-1-piperazinyl]-3-(4-fluorophenyl)-1-methyl-4-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)



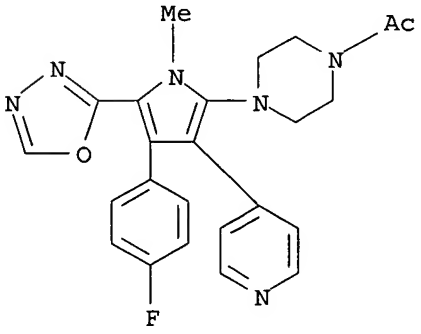
RN 678162-93-1 HCAPLUS
CN 1-Piperazinecarboxylic acid, 4-[4-(4-fluorophenyl)-5-[(methoxymethylamino)carbonyl]-1-methyl-3-(4-pyridinyl)-1H-pyrrol-2-yl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



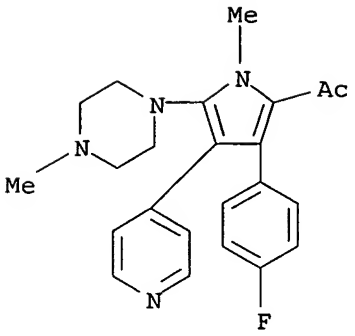
RN 678162-99-7 HCAPLUS
CN 1-Piperazinecarboxylic acid, 4-[4-(4-fluorophenyl)-5-(hydroxymethyl)-1-methyl-3-(4-pyridinyl)-1H-pyrrol-2-yl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



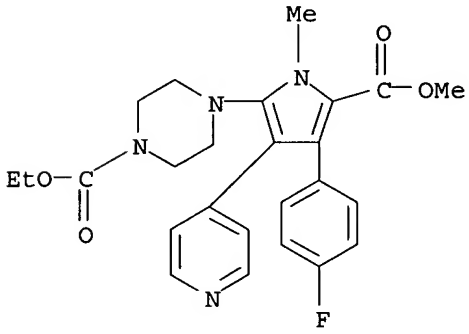
RN 678163-05-8 HCAPLUS
CN Piperazine, 1-acetyl-4-[4-(4-fluorophenyl)-1-methyl-5-(1,3,4-oxadiazol-2-yl)-3-(4-pyridinyl)-1H-pyrrol-2-yl]- (9CI) (CA INDEX NAME)



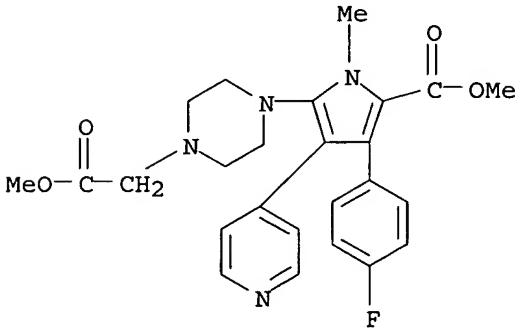
RN 678163-25-2 HCAPLUS
CN Ethanone, 1-[3-(4-fluorophenyl)-1-methyl-5-(4-methyl-1-piperazinyl)-4-(4-pyridinyl)-1H-pyrrol-2-yl]- (9CI) (CA INDEX NAME)



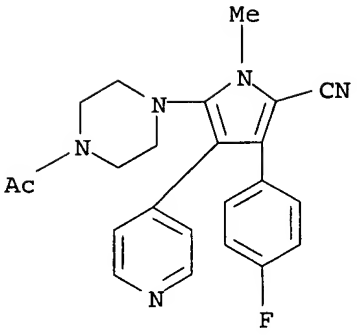
RN 678163-26-3 HCAPLUS
CN 1-Piperazinecarboxylic acid, 4-[4-(4-fluorophenyl)-5-(methoxycarbonyl)-1-methyl-3-(4-pyridinyl)-1H-pyrrol-2-yl]-, ethyl ester (9CI) (CA INDEX NAME)



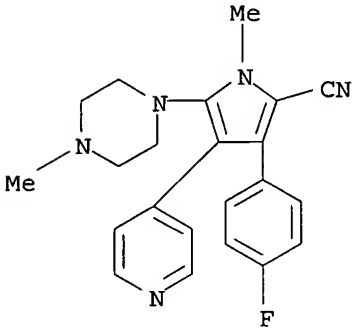
RN 678163-28-5 HCAPLUS
CN 1-Piperazineacetic acid, 4-[4-(4-fluorophenyl)-5-(methoxycarbonyl)-1-methyl-3-(4-pyridinyl)-1H-pyrrol-2-yl]-, methyl ester (9CI) (CA INDEX NAME)



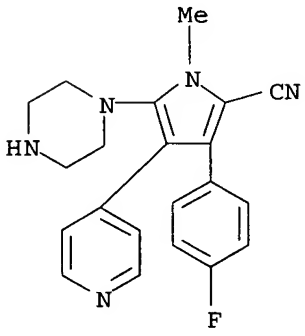
RN 678163-29-6 HCAPLUS
CN Piperazine, 1-acetyl-4-[5-cyano-4-(4-fluorophenyl)-1-methyl-3-(4-pyridinyl)-1H-pyrrol-2-yl]- (9CI) (CA INDEX NAME)



RN 678163-30-9 HCAPLUS
CN 1H-Pyrrole-2-carbonitrile, 3-(4-fluorophenyl)-1-methyl-5-(4-methyl-1-piperazinyl)-4-(4-pyridinyl)- (9CI) (CA INDEX NAME)



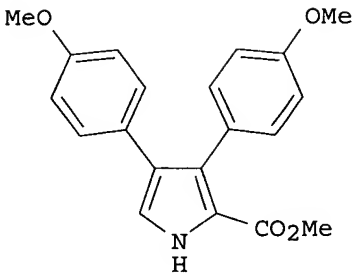
RN 678163-33-2 HCAPLUS
CN 1H-Pyrrole-2-carbonitrile, 3-(4-fluorophenyl)-1-methyl-5-(1-piperazinyl)-4-(4-pyridinyl)- (9CI) (CA INDEX NAME)



L49 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3
ACCESSION NUMBER: 2004:448213 HCAPLUS
DOCUMENT NUMBER: 140:404063
TITLE: Disruption of CCTβ2 expression leads to gonadal dysfunction
AUTHOR(S): Jackowski, Suzanne; Rehg, Jerold E.; **Zhang, Yong-Mei**; Wang, Jina; Miller, Karen;

Jackson, Pam; Karim, Mohammad A.
CORPORATE SOURCE: Department of Infectious Diseases, St. Jude Children's Research Hospital, Memphis, TN, 38105, USA
SOURCE: Molecular and Cellular Biology (2004), 24(11), 4720-4733
CODEN: MCEBD4; ISSN: 0270-7306
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB There are two mammalian genes that encode isoforms of CTP:phosphocholine cytidylyltransferase (CCT), a key rate-controlling step in membrane phospholipid biogenesis. Quant. determination of the CCT transcripts reveals that CCTα is ubiquitously expressed and is found at the highest levels in the testis and lung, with lower levels in the liver and ovary. CCTβ2 is a very minor isoform in most tissues but is significantly expressed in the brain, lung, and gonads. CCTβ3 is the third isoform recently discovered in mice and is expressed in the same tissues as CCTβ2, with its highest level in testes. We investigated the role(s) of CCTβ2 by generating knockout mice. The brains and lungs of mice lacking CCTβ2 expression did not exhibit any overt defects. On the other hand, a large percentage of the CCTβ2-/- females were sterile and their ovaries exhibited defective ovarian follicle development. The proportion of female CCTβ2-/- mice with defective ovaries increased as the animals aged. The rare litters born from CCTβ2-/- + CCTβ2-/0 matings had the normal number of pups. The abnormal ovarian histopathol. was characterized by disorganization of the tissue in young adult mice and absence of follicles and ova in older mice, along with interstitial stromal cell hyperplasia which culminated in the emergence of tubulostromal ovarian tumors by 16 mo of age. Grossly defective CCTβ2-/- ovaries were associated with high follicle-stimulating (FSH) and luteinizing (LH) hormone levels. Male CCTβ2-/0 mice exhibited progressive multi-focal testicular degeneration and reduced fertility but had normal FSH and LH levels. Thus, the most notable phenotype of CCTβ2 knockout mice was gonad degeneration and reproductive deficiency. The results indicate that although CCTβ2 is expressed at very low levels compared to the α-isoform, loss of CCTβ2 expression causes a breakdown in the gonadal response to hormonal stimulation.
REFERENCE COUNT: 67 THERE ARE 67 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L49 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 4
ACCESSION NUMBER: 2002:917652 HCAPLUS
DOCUMENT NUMBER: 138:137442
TITLE: Regioselective Preparation of 2-Substituted 3,4-Diaryl Pyrroles: A Concise Total Synthesis of Ningalin B
AUTHOR(S): **Bullington, James L.**; Wolff, Russell R.; **Jackson, Paul F.**
CORPORATE SOURCE: Discovery Research, Johnson & Johnson Pharmaceutical Research and Development, L.L.C., Raritan, NJ, 08869, USA
SOURCE: Journal of Organic Chemistry (2002), 67(26), 9439-9442
CODEN: JOCEAH; ISSN: 0022-3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 138:137442
GI



I

AB Me isocyanoacetate undergoes a 2 + 3 cycloaddn. with α,β-unsatd. nitriles to provide a regioselective synthesis of 2-substituted 3,4-diaryl pyrroles. The ease of preparation of α,β-unsatd. nitriles allows the rapid synthesis of pyrroles with varied substituents. Using this method, a key intermediate (I) for the synthesis of the marine natural products lukianol A, lamellarin O, and lamellarin Q was prepared in two steps. A total synthesis of ningalin B was also accomplished utilizing this methodol.

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L49 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 5

ACCESSION NUMBER: 2002:808686 HCAPLUS
DOCUMENT NUMBER: 138:205007
TITLE: Synthesis of pyrimido[4,5-b]indoles and benzo[4,5]furo[2,3-d]pyrimidines via palladium-catalyzed intramolecular arylation
AUTHOR(S): **Zhang, Yue-Mei**; Razler, Thomas; **Jackson, Paul F.**
CORPORATE SOURCE: Johnson & Johnson Pharmaceutical Research and Development, LLC, Raritan, NJ, 08869, USA
SOURCE: Tetrahedron Letters (2002), 43(46), 8235-8239
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 138:205007
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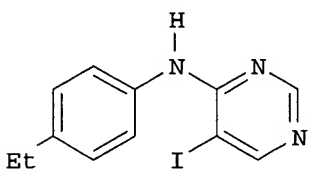

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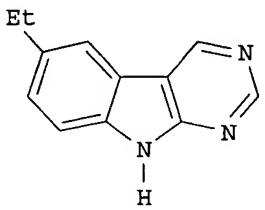

II

AB Various pyrimido[4,5-b]indoles and benzo[4,5]furo[2,3-d]pyrimidines were

synthesized via a palladium-catalyzed intramol. arylation of pyrimidine substrates. Thus, 4-aryloxy- or 4-anilino-5-iodopyrimidines, e.g. I, were treated with Pd(OAc)2(PPh3)2 and base in DMF to give the regioselective cyclized heterocycles, e.g. II.

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L49 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 6

ACCESSION NUMBER: 2002:607174 HCAPLUS
DOCUMENT NUMBER: 138:162771
TITLE: Pyridinylimidazole based p38 MAP kinase inhibitors
AUTHOR(S): **Jackson, Paul F.; Bullington, James L.**
CORPORATE SOURCE: Discovery Research, Johnson and Johnson Pharmaceutical Research and Development, L.L.C., Raritan, NJ, 08869, USA
SOURCE: Current Topics in Medicinal Chemistry (Hilversum, Netherlands) (2002), 2(9), 1011-1020
CODEN: CTMCCL; ISSN: 1568-0266
PUBLISHER: Bentham Science Publishers Ltd.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review. The p38 MAP kinase is thought to be involved in a variety of inflammatory and immunol. disorders such as rheumatoid arthritis. The pyridinylimidazole class of compds. was the first to potently inhibit this kinase. Since the original reports of their efficacy, they have become the most widely studied series of inhibitors of this kinase. This framework has served as a starting point for further synthetic work and several compds. have entered clin. trials. These compds. have also been utilized to elucidate the role of p38 kinase in the immune system, and more recently have been used to examine the role of this kinase in central nervous system disorders.

REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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FILE COVERS 1907 - 28 Jul 2006  VOL 145 ISS 6
FILE LAST UPDATED: 27 Jul 2006  (20060727/ED)

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 This file contains CAS Registry Numbers for easy and accurate
 substance identification.
'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

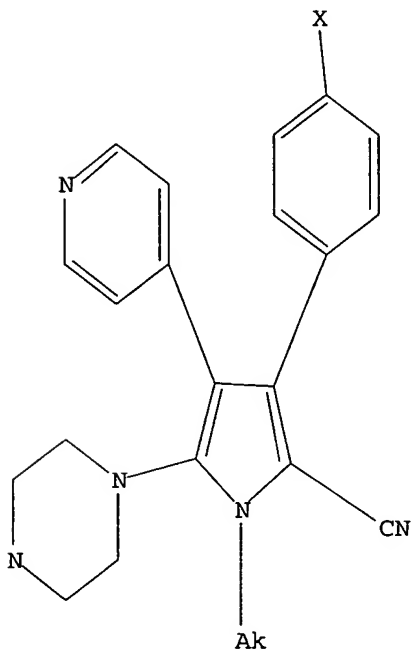
=> d stat que L16
L1        886180 SEA FILE=REGISTRY ABB=ON  PLU=ON  (NC4/ESS AND NRS>2 AND N>1
                 AND (>1 Q/REL))
L3               STR
```

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L5 174 SEA FILE=REGISTRY SUB=L1 SSS FUL L3
L7 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L9 106 SEA FILE=REGISTRY SUB=L5 SSS FUL L7
L10 68 SEA FILE=REGISTRY ABB=ON PLU=ON L5 NOT L9
L11 8 SEA FILE=HCAPLUS ABB=ON PLU=ON L10
L12 STR



Structure attributes must be viewed using STN Express query preparation.
L14 3 SEA FILE=REGISTRY SUB=L5 SSS FUL L12
L15 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L14
L16 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 AND L11

=> file beilstein
FILE 'BEILSTEIN' ENTERED AT 15:23:08 ON 28 JUL 2006
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FILE LAST UPDATED ON JUNE 16, 2006

FILE COVERS 1771 TO 2006.
*** FILE CONTAINS 9,606,495 SUBSTANCES ***

>>>PLEASE NOTE: Reaction Data and substance data are stored in
separate documents and can not be searched together in one query.
Reaction data for BEILSTEIN compounds may be displayed
immediately with the display codes PRE (preparations) and REA

(reactions). A substance answer set retrieved after the search for a chemical name, a compounds with available reaction information by combining with PRE/FA, REA/FA or more generally with RX/FA. The BEILSTEIN Registry Number (BRN) is the link between a BEILSTEIN compound and belonging reactions. For mo detailed reaction searches BRNs can be searched as reaction partner BRNs Reactant BRN (RX.RBRN) or Product BRN (RX.PBRN).<<<

>>> FOR SEARCHING PREPARATIONS SEE HELP PRE <<<

```
**********************************************************************
* PLEASE NOTE THAT THERE ARE NO FORMATS FREE OF COST.                *
* SET NOTICE FEATURE: THE COST ESTIMATES CALCULATED FOR SET NOTICE   *
* ARE BASED ON THE HIGHEST PRICE CATEGORY. THEREFORE; THESE          *
* ESTIMATES MAY NOT REFLECT THE ACTUAL COSTS.                        *
* FOR PRICE INFORMATION SEE HELP COST                                *
**********************************************************************
```

NEW

*** PATENT NUMBERS (PN) AND BABS ACCESSION NUMBERS (BABSAN) CAN NOW BE SEARCHED, SELECTED AND TRANSFERRED.**

*** NEW DISPLAY FORMATS ALLREF, ALLP AND BABSAN SHOW ALL REFERENCES, ALL PATENT REFERENCES, OR ALL BABS ACCESSION NUMBERS FOR A COMPOUND AT A GLANCE.**

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=> d stat que L32
L12             STR
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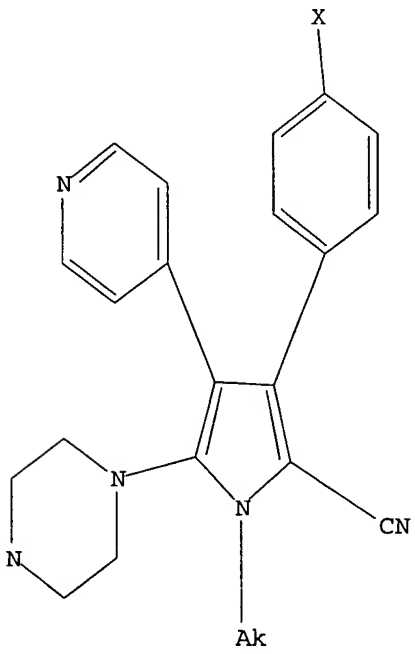


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Structure attributes must be viewed using STN Express query preparation.
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100.0% PROCESSED       0 ITERATIONS                    0 ANSWERS
SEARCH TIME: 00.00.02
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=> file marpat
FILE 'MARPAT' ENTERED AT 15:23:32 ON 28 JUL 2006
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FILE CONTENT: 1961-PRESENT VOL 144 ISS 26 (20060721/ED)

SOME MARPAT RECORDS ARE DERIVED FROM INPI DATA FOR 1961-1987

MOST RECENT CITATIONS FOR PATENTS FROM MAJOR ISSUING AGENCIES
(COVERAGE TO THESE DATES IS NOT COMPLETE):

US   2006118302 08 JUN 2006
DE 102004054303 11 MAY 2006
EP      1657292 17 MAY 2006
JP   2006120460 11 MAY 2006
WO   2006053912 26 MAY 2006
GB      2419594 03 MAY 2006
FR      2877567 12 MAY 2006
RU      2275374 27 APR 2006
CA      2518664 10 MAR 2006

Expanded G-group definition display now available.

New CAS Information Use Policies, enter HELP USAGETERMS for details.


=> d stat que L34
L12             STR
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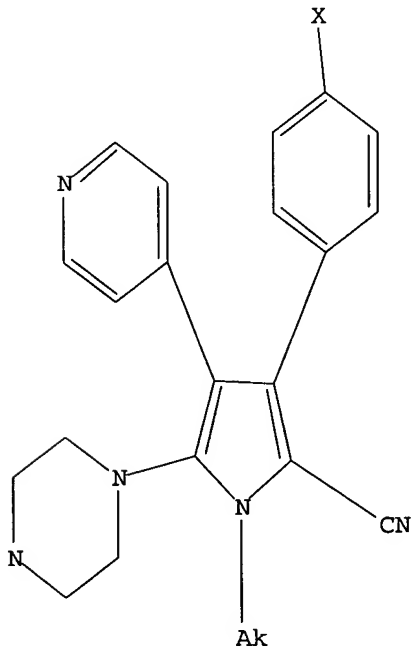


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Structure attributes must be viewed using STN Express query preparation.
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100.0% PROCESSED 2804 ITERATIONS 1 ANSWERS
SEARCH TIME: 00.00.06

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FILE 'WPIX' ENTERED AT 15:23:45 ON 28 JUL 2006

FILE LAST UPDATED: 24 JUL 2006 <20060724/UP>
MOST RECENT DERWENT UPDATE: 200647 <200647/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

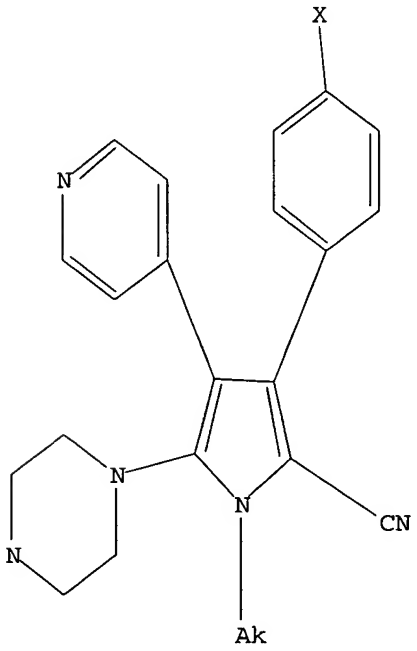
>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,
PLEASE VISIT:
http://www.stn-international.de/training_center/patents/stn_guide.pdf <

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
http://scientific.thomson.com/support/patents/coverage/latestupdates/

>>> PLEASE BE AWARE OF THE NEW IPC REFORM IN 2006, SEE
http://www.stn-international.de/stndatabases/details/ipc_reform.html and
http://scientific.thomson.com/media/scpdf/ipcrdwpi.pdf <<<

>>> FOR FURTHER DETAILS ON THE FORTHCOMING DERWENT WORLD PATENTS
INDEX ENHANCEMENTS PLEASE VISIT:
http://www.stn-international.de/stndatabases/details/dwpi_r.html <<<
'BIX' IS DEFAULT SEARCH FIELD FOR 'WPIX' FILE

=> d stat que L46
L12 STR



Structure attributes must be viewed using STN Express query preparation.

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L44             1 SEA FILE=WPIX ABB=ON  PLU=ON  (888697-0-0-0/DCRE OR 888700-0-0-
                  0/DCRE)
L45             1 SEA FILE=WPIX ABB=ON  PLU=ON  L42/DCR
L46             1 SEA FILE=WPIX ABB=ON  PLU=ON  (L43 OR L44 OR L45)


=> dup rem L16 L32 L34 L46
L32 HAS NO ANSWERS
DUPLICATE IS NOT AVAILABLE IN 'BEILSTEIN'.
ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE
FILE 'HCAPLUS' ENTERED AT 15:24:48 ON 28 JUL 2006
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FILE 'WPIX' ENTERED AT 15:24:48 ON 28 JUL 2006
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PROCESSING COMPLETED FOR L16
PROCESSING COMPLETED FOR L32
PROCESSING COMPLETED FOR L34
PROCESSING COMPLETED FOR L46
L50             1 DUP REM L16 L32 L34 L46 (2 DUPLICATES REMOVED)
                  ANSWER '1' FROM FILE HCAPLUS

=> d ibib abs hitstr L50 1

L50  ANSWER 1 OF 1  HCAPLUS  COPYRIGHT 2006 ACS on STN DUPLICATE 1
ACCESSION NUMBER:         2004:292020  HCAPLUS
DOCUMENT NUMBER:          140:321233
TITLE:                    A preparation of pyrrole derivatives useful for the
                          treatment of disorders ameliorated by reduction of
                          TNF-α production and/or p38 activity
INVENTOR(S):              Bullington, James L.; Fan, Xiaodong; Jackson, Paul F.;
                          Zhang, Yue-mei
PATENT ASSIGNEE(S):       Janssen Pharmaceutica N.V., Belg.
SOURCE:                   PCT Int. Appl., 116 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
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     WO 2004029040         A1    20040408    WO 2003-US30223         20030924
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             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
             PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT,
             TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
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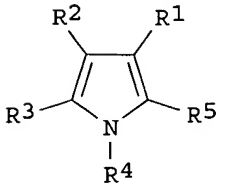
FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2500221	AA	20040408	CA 2003-2500221		20030924
AU 2003278927	A1	20040419	AU 2003-278927		20030924
US 2005043331	A1	20050224	US 2003-670031		20030924
EP 1549635	A1	20050706	EP 2003-770442		20030924
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK					
BR 2003014783	A	20050726	BR 2003-14783		20030924
CN 1701069	A	20051123	CN 2003-825319		20030924
JP 2006511479	T2	20060406	JP 2004-539896		20030924
NO 2005001967	A	20050621	NO 2005-1967		20050422
PRIORITY APPLN. INFO.:			US 2002-414436P	P	20020927
			WO 2003-US30223	W	20030924

OTHER SOURCE(S): MARPAT 140:321233

GI



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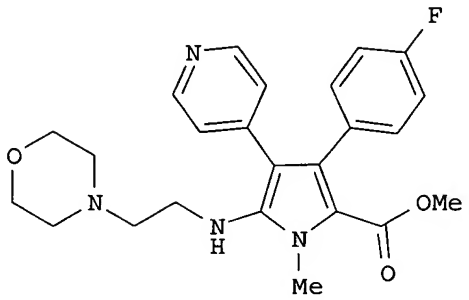

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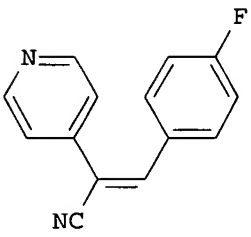

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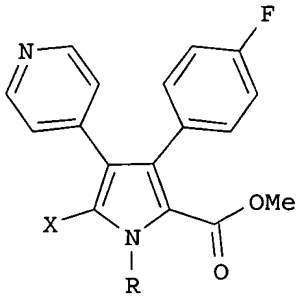


IV

AB The invention relates to 3-pyridyl-4-arylpyrrole derivs. of formula I [wherein: R1 and R2 are independently selected from (un)substituted (hetero)aryl; R3 = H, (un)substituted alkyl, -N:CR6-, -C(O)R7, etc.; R4 = H, (un)substituted alkyl, (un)substituted (hetero)aryl, etc.; R5 = (un)substituted alkyl, C(O)OR7, C(O)R7, CN, NO2, halo, etc.; R6 and R7 are independently selected from H, (un)substituted alkyl, (un)substituted aryl, (un)substituted heterocycle; with provisos], and pharmaceutical compns. comprising the same, useful for treating disorders ameliorated by reducing TNF-α production and/or p38 activity in appropriate cells. The invention compds. I were screened for p38 inhibition (in-vitro enzyme assays) and TNF-α inhibition (in-vitro whole cell assays and in vivo rodent assay). The invention also provides therapeutic and prophylactic methods using the instant pharmaceutical compns. For instance, pyrrole derivative II (compound 5; mouse 10 mg/kg, 0.5 h, 44% inhibition of TNF-α

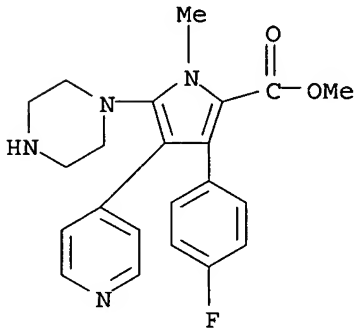
production) was prepared via condensation of 4-fluorobenzaldehyde with 4-pyridylacetonitrile, heterocyclization of the obtained pyridine derivative III with Me isocyanoacetate, N-methylation of the pyrrole ring of the obtained pyrrolecarboxylate derivative IV (X = H, R = H), bromination of the pyrrolecarboxylate derivative IV (X = H, R = Me), and subsequent amination of the obtained bromopyrrole derivative IV (X = Br, R = Me) by 4-(2-aminoethyl)morpholine.

IT **678161-35-8P 678161-52-9P**

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(intermediate; preparation of pyridyl(aryl)pyrrole derivs. useful for the treatment of disorders ameliorated by reduction of TNF-α production and/or p38 activity)

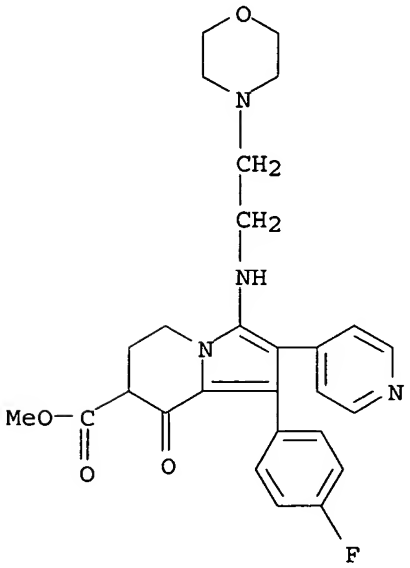
RN 678161-35-8 HCAPLUS

CN 1H-Pyrrole-2-carboxylic acid, 3-(4-fluorophenyl)-1-methyl-5-(1-piperazinyl)-4-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)

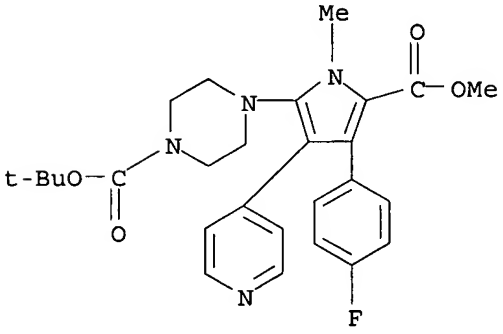


RN 678161-52-9 HCAPLUS

CN 7-Indolizinecarboxylic acid, 1-(4-fluorophenyl)-5,6,7,8-tetrahydro-3-[[2-(4-morpholinyl)ethyl]amino]-8-oxo-2-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)



IT **678161-34-7**
RL: PAC (Pharmacological activity); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(preparation of pyridyl(aryl)pyrrole derivs. useful for the treatment of disorders ameliorated by reduction of TNF-α production and/or p38 activity)
RN 678161-34-7 HCAPLUS
CN 1-Piperazinecarboxylic acid, 4-[4-(4-fluorophenyl)-5-(methoxycarbonyl)-1-methyl-3-(4-pyridinyl)-1H-pyrrol-2-yl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



IT **678161-38-1P 678161-40-5P 678161-41-6P**
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678162-36-2P 678162-37-3P 678162-39-5P
678162-41-9P 678162-43-1P 678162-45-3P
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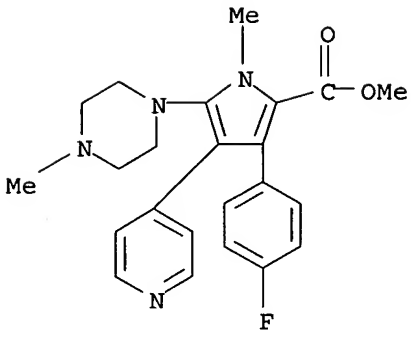
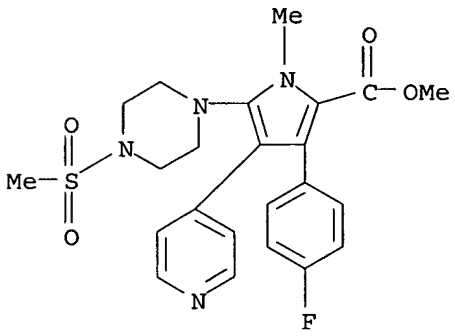
678163-30-9P 678163-33-2P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of pyridyl(aryl)pyrrole derivs. useful for the treatment of disorders ameliorated by reduction of TNF-α production and/or p38 activity)
RN 678161-38-1 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 3-(4-fluorophenyl)-1-methyl-5-(4-methyl-1-piperazinyl)-4-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)



RN 678161-40-5 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 3-(4-fluorophenyl)-1-methyl-5-[4-(methylsulfonyl)-1-piperazinyl]-4-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)



RN 678161-41-6 HCAPLUS
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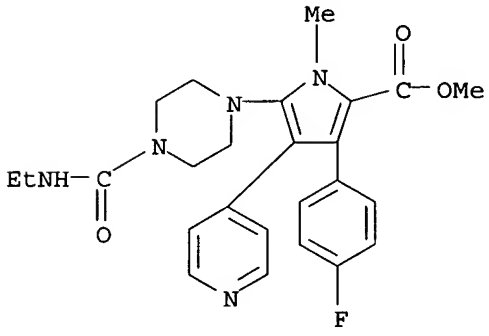

RN 678161-42-7 HCAPLUS
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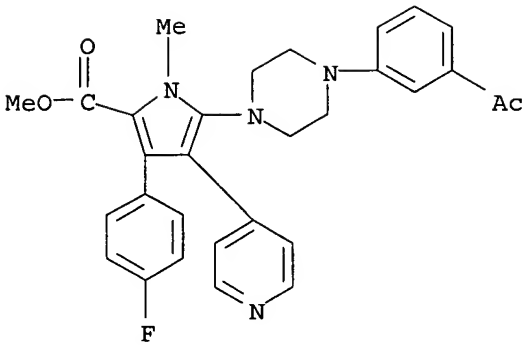

RN 678161-54-1 HCAPLUS
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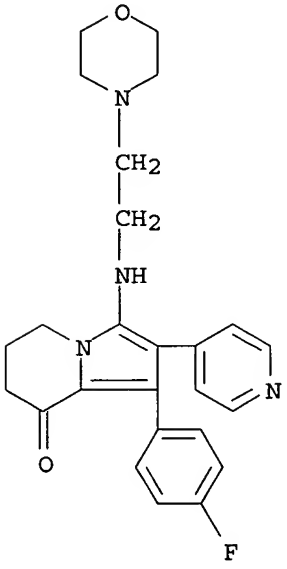

RN 678162-27-1 HCAPLUS
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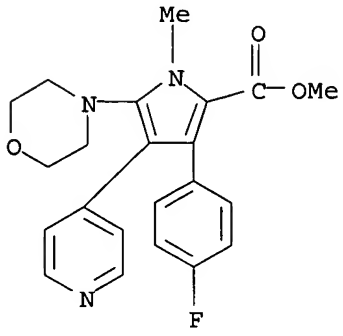

RN 678162-29-3 HCAPLUS
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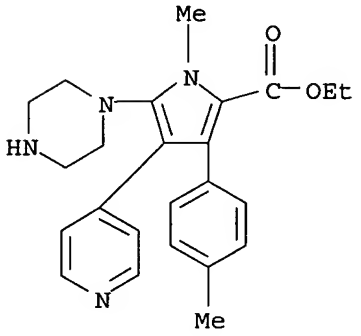
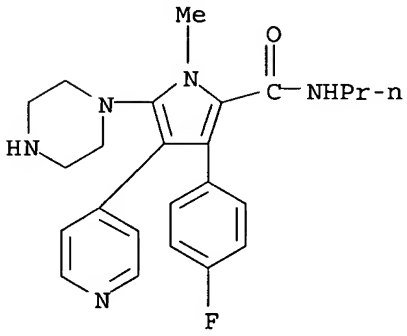
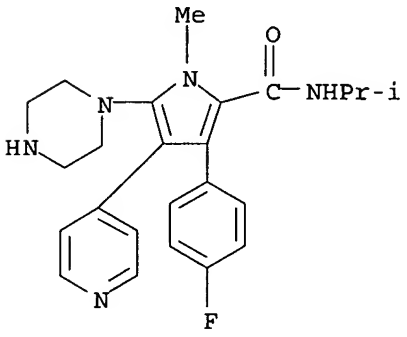


RN 678162-34-0 HCAPLUS
CN 1H-Pyrrole-2-carboxamide, 3-(4-fluorophenyl)-1-methyl-5-(1-piperazinyl)-N-propyl-4-(4-pyridinyl)- (9CI) (CA INDEX NAME)

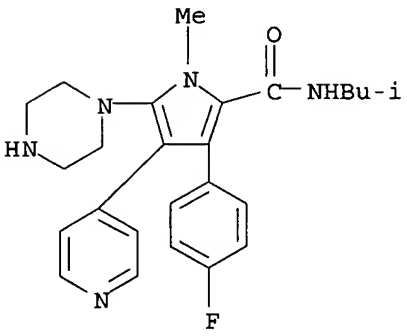


RN 678162-35-1 HCAPLUS
CN 1H-Pyrrole-2-carboxamide, 3-(4-fluorophenyl)-1-methyl-N-(1-methylethyl)-5-(1-piperazinyl)-4-(4-pyridinyl)- (9CI) (CA INDEX NAME)

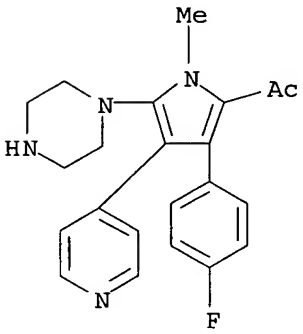


RN 678162-36-2 HCAPLUS
CN 1H-Pyrrole-2-carboxamide, 3-(4-fluorophenyl)-1-methyl-N-(2-methylpropyl)-5-

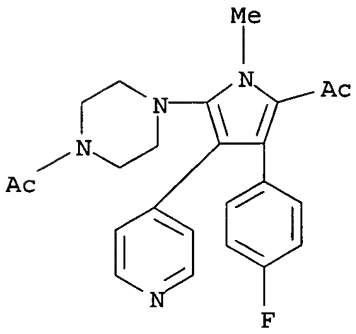
(1-piperazinyl)-4-(4-pyridinyl)- (9CI) (CA INDEX NAME)



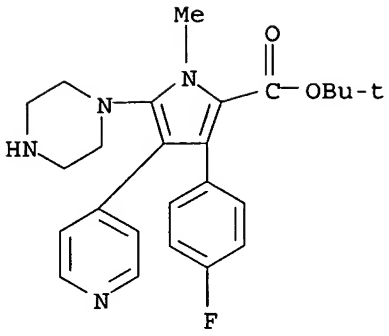
RN 678162-37-3 HCAPLUS
CN Ethanone, 1-[3-(4-fluorophenyl)-1-methyl-5-(1-piperazinyl)-4-(4-pyridinyl)-1H-pyrrol-2-yl]- (9CI) (CA INDEX NAME)



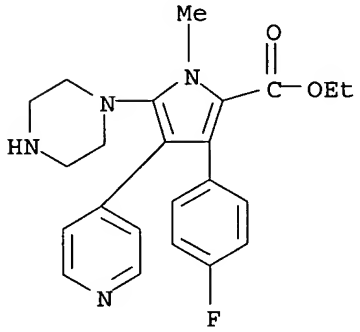
RN 678162-39-5 HCAPLUS
CN Piperazine, 1-acetyl-4-[5-acetyl-4-(4-fluorophenyl)-1-methyl-3-(4-pyridinyl)-1H-pyrrol-2-yl]- (9CI) (CA INDEX NAME)



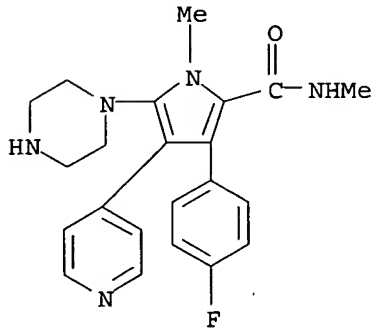
RN 678162-41-9 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 3-(4-fluorophenyl)-1-methyl-5-(1-piperazinyl)-4-(4-pyridinyl)-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



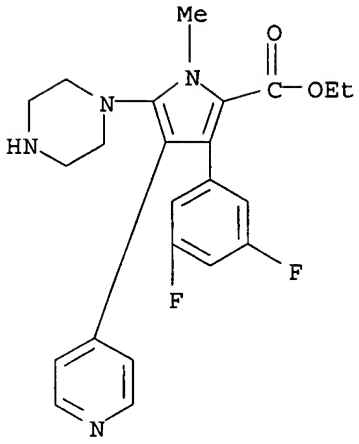
RN 678162-43-1 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 3-(4-fluorophenyl)-1-methyl-5-(1-piperazinyl)-4-(4-pyridinyl)-, ethyl ester (9CI) (CA INDEX NAME)



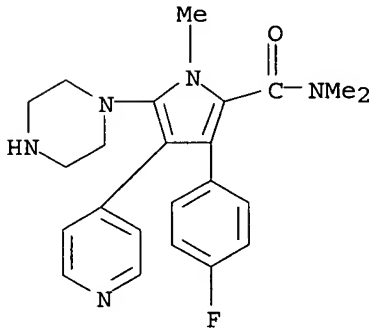
RN 678162-45-3 HCAPLUS
CN 1H-Pyrrole-2-carboxamide, 3-(4-fluorophenyl)-N,1-dimethyl-5-(1-piperazinyl)-4-(4-pyridinyl)- (9CI) (CA INDEX NAME)



RN 678162-46-4 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 3-(3,5-difluorophenyl)-1-methyl-5-(1-piperazinyl)-4-(4-pyridinyl)-, ethyl ester (9CI) (CA INDEX NAME)



RN 678162-47-5 HCAPLUS
CN 1H-Pyrrole-2-carboxamide, 3-(4-fluorophenyl)-N,N,1-trimethyl-5-(1-piperazinyl)-4-(4-pyridinyl)- (9CI) (CA INDEX NAME)



RN 678162-50-0 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 1-methyl-5-(1-piperazinyl)-4-(4-pyridinyl)-3-[3-(trifluoromethyl)phenyl]-, ethyl ester (9CI) (CA INDEX NAME)

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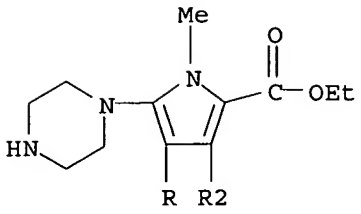
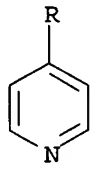
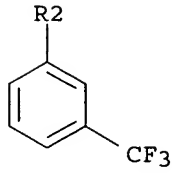


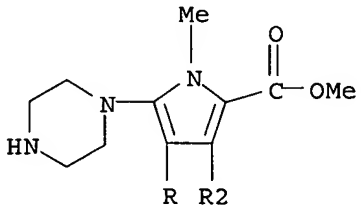


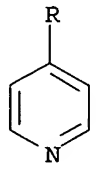
PAGE 2-A



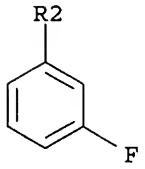
RN 678162-51-1 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 3-(3-fluorophenyl)-1-methyl-5-(1-piperazinyl)-4-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)

PAGE 1-A

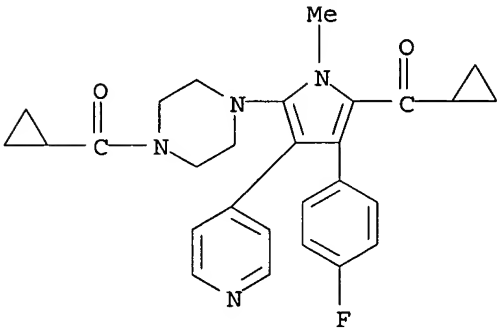




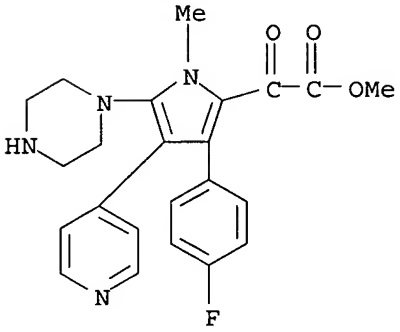
PAGE 2-A



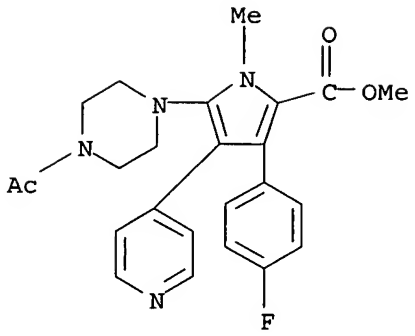
RN 678162-52-2 HCAPLUS
CN Piperazine, 1-(cyclopropylcarbonyl)-4-[5-(cyclopropylcarbonyl)-4-(4-fluorophenyl)-1-methyl-3-(4-pyridinyl)-1H-pyrrol-2-yl]- (9CI) (CA INDEX NAME)



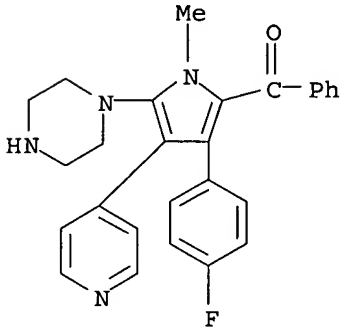
RN 678162-53-3 HCAPLUS
CN 1H-Pyrrole-2-acetic acid, 3-(4-fluorophenyl)-1-methyl-α-oxo-5-(1-piperazinyl)-4-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)



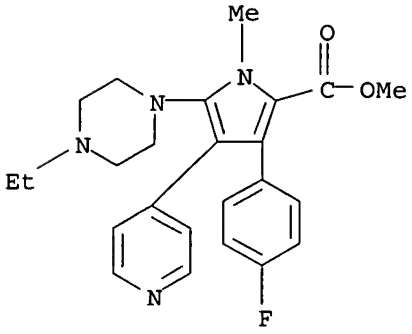
RN 678162-61-3 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 5-(4-acetyl-1-piperazinyl)-3-(4-fluorophenyl)-1-methyl-4-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)



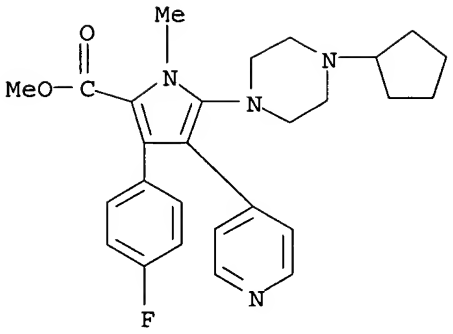
RN 678162-62-4 HCAPLUS
CN Methanone, [3-(4-fluorophenyl)-1-methyl-5-(1-piperazinyl)-4-(4-pyridinyl)-1H-pyrrol-2-yl]phenyl- (9CI) (CA INDEX NAME)



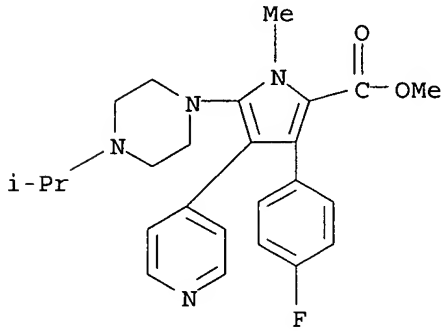
RN 678162-69-1 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 5-(4-ethyl-1-piperazinyl)-3-(4-fluorophenyl)-1-methyl-4-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)



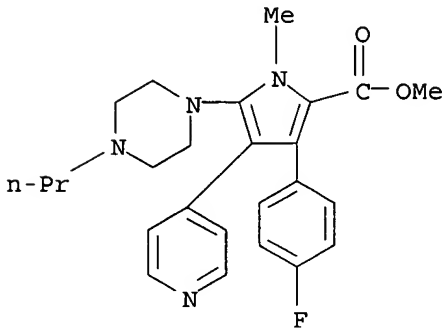
RN 678162-70-4 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 5-(4-cyclopentyl-1-piperazinyl)-3-(4-fluorophenyl)-1-methyl-4-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)



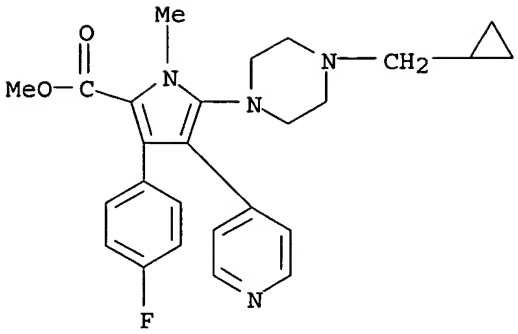
RN 678162-71-5 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 3-(4-fluorophenyl)-1-methyl-5-[4-(1-methylethyl)-1-piperazinyl]-4-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)



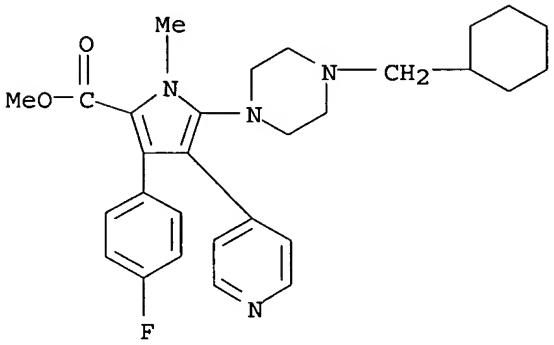
RN 678162-72-6 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 3-(4-fluorophenyl)-1-methyl-5-(4-propyl-1-piperazinyl)-4-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)



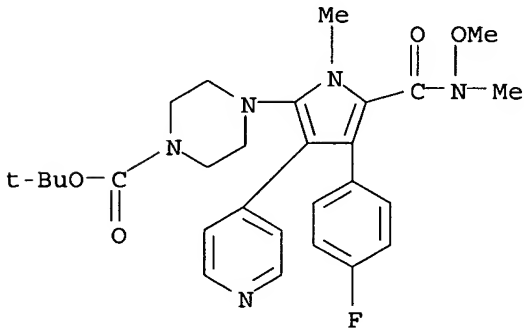
RN 678162-73-7 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 5-[4-(cyclopropylmethyl)-1-piperazinyl]-3-(4-fluorophenyl)-1-methyl-4-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)



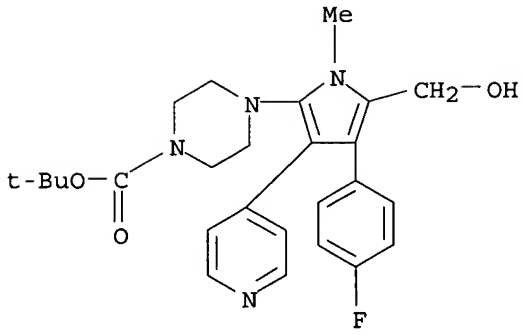
RN 678162-75-9 HCAPLUS
CN 1H-Pyrrole-2-carboxylic acid, 5-[4-(cyclohexylmethyl)-1-piperazinyl]-3-(4-fluorophenyl)-1-methyl-4-(4-pyridinyl)-, methyl ester (9CI) (CA INDEX NAME)



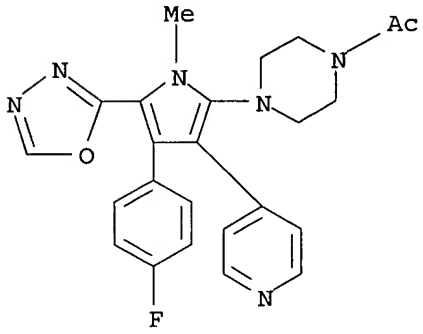
RN 678162-93-1 HCAPLUS
CN 1-Piperazinecarboxylic acid, 4-[4-(4-fluorophenyl)-5-[(methoxymethylamino)carbonyl]-1-methyl-3-(4-pyridinyl)-1H-pyrrol-2-yl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



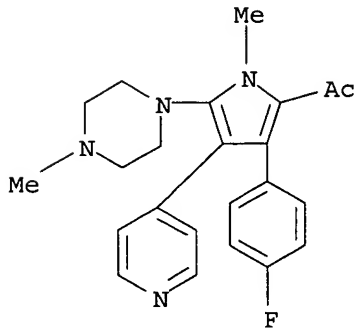
RN 678162-99-7 HCAPLUS
CN 1-Piperazinecarboxylic acid, 4-[4-(4-fluorophenyl)-5-(hydroxymethyl)-1-methyl-3-(4-pyridinyl)-1H-pyrrol-2-yl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



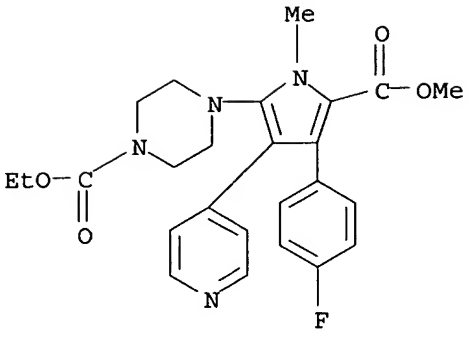
RN 678163-05-8 HCAPLUS
CN Piperazine, 1-acetyl-4-[4-(4-fluorophenyl)-1-methyl-5-(1,3,4-oxadiazol-2-yl)-3-(4-pyridinyl)-1H-pyrrol-2-yl]- (9CI) (CA INDEX NAME)



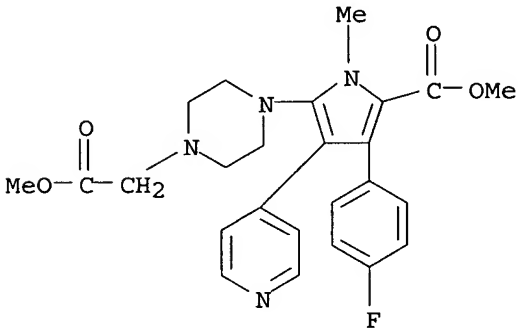
RN 678163-25-2 HCAPLUS
CN Ethanone, 1-[3-(4-fluorophenyl)-1-methyl-5-(4-methyl-1-piperazinyl)-4-(4-pyridinyl)-1H-pyrrol-2-yl]- (9CI) (CA INDEX NAME)



RN 678163-26-3 HCAPLUS
CN 1-Piperazinecarboxylic acid, 4-[4-(4-fluorophenyl)-5-(methoxycarbonyl)-1-methyl-3-(4-pyridinyl)-1H-pyrrol-2-yl]-, ethyl ester (9CI) (CA INDEX NAME)



RN 678163-28-5 HCAPLUS
CN 1-Piperazineacetic acid, 4-[4-(4-fluorophenyl)-5-(methoxycarbonyl)-1-methyl-3-(4-pyridinyl)-1H-pyrrol-2-yl]-, methyl ester (9CI) (CA INDEX NAME)



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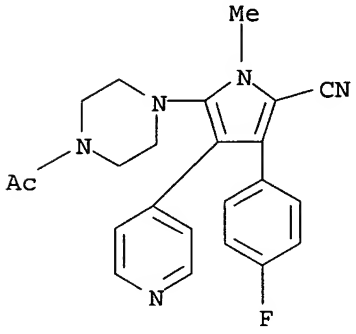
CN Piperazine, 1-acetyl-4-[5-cyano-4-(4-fluorophenyl)-1-methyl-3-(4-pyridinyl)-1H-pyrrol-2-yl]- (9CI) (CA INDEX NAME)



RN 678163-30-9 HCAPLUS
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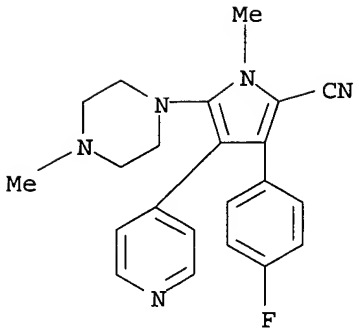

RN 678163-33-2 HCAPLUS
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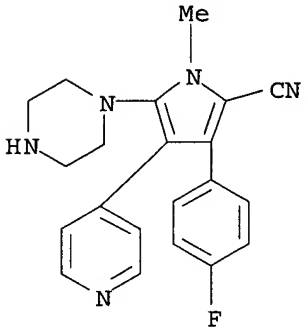

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FILE LAST UPDATED: 27 Jul 2006 (20060727/ED)

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                AND (>1 Q/REL))
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* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
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* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

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L11           8 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L10


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L52           7 L11 NOT L16

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L52  ANSWER 1 OF 7  HCAPLUS  COPYRIGHT 2006 ACS on STN
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DOCUMENT NUMBER:          135:137517
TITLE:                    Preparation of pyridyl- and pyrimidinyl-substituted
                          fused pyrroles as cytokine inhibitors
INVENTOR(S):              Striegel, Hans-Guenter; Laufer, Stefan; Tollmann
                          Neher, Karola; Tries, Susanne
PATENT ASSIGNEE(S):       Merckle GmbH Chemisch Pharmazeutische Fabrik, Germany
SOURCE:                   Ger. Offen., 22 pp.
                          CODEN: GWXXBX
DOCUMENT TYPE:            Patent
LANGUAGE:                 German
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.          DATE
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     DE 10004157          A1     20010802    DE 2000-10004157         20000201
     CA 2398111           AA     20010809    CA 2001-2398111          20010131
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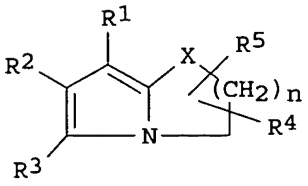
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     EP 1252163           A2     20021030    EP 2001-902370           20010131
     EP 1252163           B1     20030924
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
     JP 2003525227        T2     20030826    JP 2001-557873           20010131
     AT 250608            E      20031015    AT 2001-902370           20010131
     PT 1252163           T      20040227    PT 2001-902370           20010131
     ES 2208548           T3     20040616    ES 2001-1902370          20010131
```

narrow structure search

NO 2002003634	A	20020925	NO 2002-3634		20020731
US 2003153558	A1	20030814	US 2002-182579		20021105
US 6867211	B2	20050315			
PRIORITY APPLN. INFO.:			DE 2000-10004157	A	20000201
			WO 2001-EP1011	W	20010131

OTHER SOURCE(S): CASREACT 135:137517; MARPAT 135:137517
GI

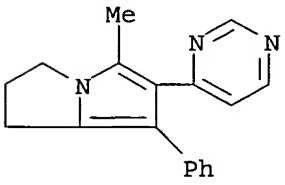


I

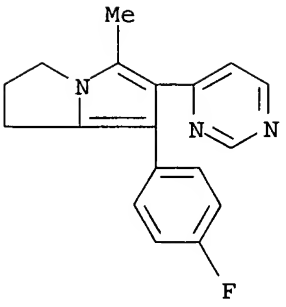
AB Title compds. [I; the first of R1-R3 = (substituted) 4-pyridyl, 2,4-pyrimidyl, 3-amino-2,4-pyrimidinyl; the second of R1-R3 = (substituted) Ph, thienyl; the third of R1-R3 = H, CO2H, alkoxycarbonyl, CH2OH, alkyl; R4, R5 = H, alkyl; X = CH2, S, O; n = 1, 2], and their use as pharmaceuticals is claimed. Thus, 3-(4-fluorophenyl)-2-(4-pyridyl)-5,6,7,8-tetrahydroindolizine-1-carboxylic acid Et ester (preparation given) in THF was treated dropwise at room temperature with NaAlH2(OCH2CH2OMe)2 in PhMe followed by stirring for 24 h at 40° to give 95% [3-(4-fluorophenyl)-2-(4-pyridyl)-5,6,7,8-tetrahydroindolizin-1-yl]methanol. Several I inhibited tumor necrosis factor (TNFα), interleukin (IL-1β), 5-lipoxygenase, cyclooxygenase-1, and cyclooxygenase-2 with IC50 = 0.027-100 μmol.

IT **351493-39-5P 351493-40-8P 351493-42-0P**
351493-43-1P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of pyridyl- and pyrimidinyl-substituted fused pyrroles as cytokine inhibitors)

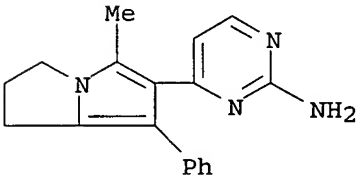
RN 351493-39-5 HCAPLUS
CN 1H-Pyrrolizine, 2,3-dihydro-5-methyl-7-phenyl-6-(4-pyrimidinyl)- (9CI) (CA INDEX NAME)



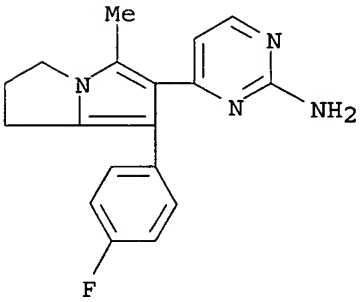
RN 351493-40-8 HCAPLUS
CN 1H-Pyrrolizine, 7-(4-fluorophenyl)-2,3-dihydro-5-methyl-6-(4-pyrimidinyl)- (9CI) (CA INDEX NAME)



RN 351493-42-0 HCAPLUS
CN 2-Pyrimidinamine, 4-(2,3-dihydro-5-methyl-7-phenyl-1H-pyrrolizin-6-yl)-
(9CI) (CA INDEX NAME)



RN 351493-43-1 HCAPLUS
CN 2-Pyrimidinamine, 4-[7-(4-fluorophenyl)-2,3-dihydro-5-methyl-1H-pyrrolizin-
6-yl]- (9CI) (CA INDEX NAME)



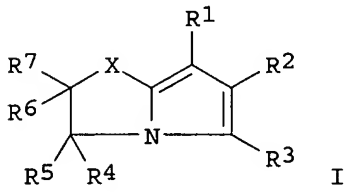
L52 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:155517 HCAPLUS
DOCUMENT NUMBER: 124:202010
TITLE: Preparation of N-sulfonylpyrrolizineacetamides and analogs as cyclooxygenase and lipoxygenase inhibitors
INVENTOR(S): Laufer, Stefan; Striegel, Hans Guenther; Dannhardt, Gerd
PATENT ASSIGNEE(S): Merckle GmbH, Germany
SOURCE: Ger. Offen., 22 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4419247	A1	19951207	DE 1994-4419247	19940601
CA 2191746	AA	19951207	CA 1995-2191746	19950531
WO 9532972	A1	19951207	WO 1995-EP2079	19950531
W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KG, KP, KR, KZ, LK, LR, LT, LV, MD, MG, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TT, UA, US, UZ, VN				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9526730	A1	19951221	AU 1995-26730	19950531
EP 763037	A1	19970319	EP 1995-921801	19950531
EP 763037	B1	20011114		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 10506370	T2	19980623	JP 1996-500334	19950531
JP 3671303	B2	20050713		
AT 208777	E	20011115	AT 1995-921801	19950531
ES 2166823	T3	20020501	ES 1995-921801	19950531
PT 763037	T	20020531	PT 1995-921801	19950531
NO 9605095	A	19961129	NO 1996-5095	19961129
NO 310076	B1	20010514		
FI 9604773	A	19970127	FI 1996-4773	19961129
FI 114099	B1	20040813		
US 5942535	A	19990824	US 1997-737921	19970328
PRIORITY APPLN. INFO.:			DE 1994-4419247 A	19940601
			WO 1995-EP2079 W	19950531

OTHER SOURCE(S): MARPAT 124:202010

GI



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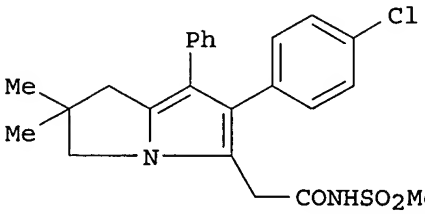


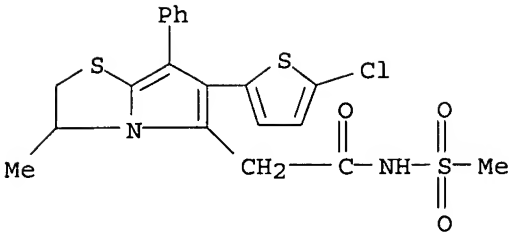
II

AB Title compds. [I; 2 of R1-R3 = H or (hetero)aryl and the other = COCO2H, alkoxycarbonyl, sulfonylcarbamoylalkyl, etc.; R4-R7 = H or alkyl; 2 vicinal R4-R7 = bond; X = CH2, O, S, (alkyl)imino, etc] were prepared Thus, title compound II had IC50 of 2.3x10-7 and 1.5x10-7 (units not given) against lipoxygenase and cyclooxygenase, resp.

IT **174348-04-0P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of N-sulfonylpyrrolizineacetamides and analogs as cyclooxygenase and lipoxygenase inhibitors)

RN 174348-04-0 HCAPLUS

CN Pyrrolo[2,1-b]thiazole-5-acetamide, 6-(5-chloro-2-thienyl)-2,3-dihydro-3-methyl-N-(methylsulfonyl)-7-phenyl- (9CI) (CA INDEX NAME)



L52 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:155516 HCAPLUS
DOCUMENT NUMBER: 124:202009
TITLE: Preparation of heteroarylpyrrolizineacetates and analogs as cyclooxygenase and lipoxygenase inhibitors
INVENTOR(S): Laufer, Stefan; Striegel, Hans Guenther; Dannhardt, Gerd
PATENT ASSIGNEE(S): Merckle GmbH, Germany
SOURCE: Ger. Offen., 25 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4419246	A1	19951207	DE 1994-4419246	19940601
CA 2191747	AA	19951207	CA 1995-2191747	19950531
WO 9532970	A1	19951207	WO 1995-EP2077	19950531
W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KG, KP, KR, KZ, LK, LR, LT, LV, MD, MG, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TT, UA, US, UZ, VN				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9526728	A1	19951221	AU 1995-26728	19950531
EP 763036	A1	19970319	EP 1995-921799	19950531
EP 763036	B1	20020911		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 10506368	T2	19980623	JP 1996-500332	19950531
JP 3671302	B2	20050713		
AT 223917	E	20020915	AT 1995-921799	19950531
PT 763036	T	20021231	PT 1995-921799	19950531
ES 2182903	T3	20030316	ES 1995-921799	19950531
US 5958943	A	19990928	US 1996-737919	19960328
NO 9605093	A	19961129	NO 1996-5093	19961129
NO 310291	B1	20010618		
FI 9604771	A	19970127	FI 1996-4771	19961129
FI 113964	B1	20040715		

PRIORITY APPLN. INFO.: DE 1994-4419246 A 19940601
WO 1995-EP2077 W 19950531

OTHER SOURCE(S): MARPAT 124:202009
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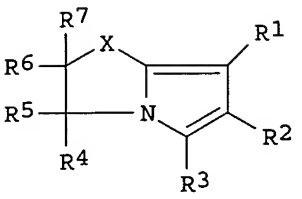

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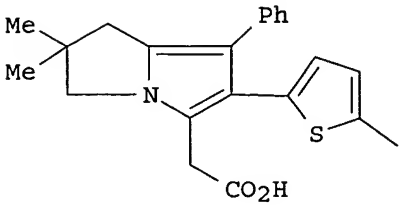


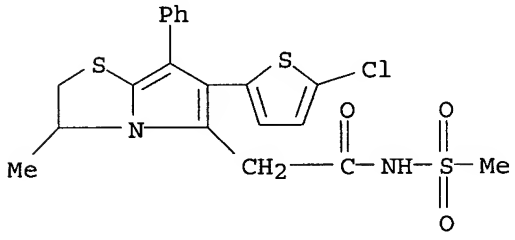
II

AB Title compds. [I; 1 of R1-R3 = heteroaryl, 1 of the remaining = H or (hetero)aryl, and the remaining = H, CHO, carboxy(alkyl), alkoxycarbonyl, etc.; R4-R7 - H or alkyl; 2 of vicinal R4-R7 = bond; X = CH2, CO, O, S, etc.] were prepared Thus, title compound II had IC50 of 4x10-7 and 2x10-7 (units not given) against lipoxygenase and cycloxygenase, resp.

IT **174348-04-0P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of heteroarylpyrrolizineacetates and analogs as cyclooxygenase and lipoxygenase inhibitors)

RN 174348-04-0 HCAPLUS

CN Pyrrolo[2,1-b]thiazole-5-acetamide, 6-(5-chloro-2-thienyl)-2,3-dihydro-3-methyl-N-(methylsulfonyl)-7-phenyl- (9CI) (CA INDEX NAME)



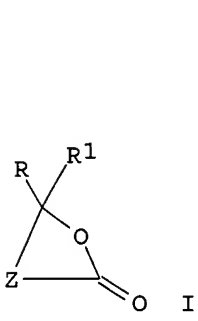
L52 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1982:21285 HCAPLUS
DOCUMENT NUMBER: 96:21285
TITLE: Lactone compounds containing an indolizine radical
INVENTOR(S): Becker, William J.; Farber, Sheldon; Hoover, Troy E.
PATENT ASSIGNEE(S): Appleton Papers, Inc., USA
SOURCE: U.S., 15 pp. Cont.-in-part of U.S. 4,232,887.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4275206	A	19810623	US 1980-112500	19800116
US 4232887	A	19801111	US 1979-17764	19790305
CA 1147728	A1	19830607	CA 1980-345510	19800212
SE 8001604	A	19800906	SE 1980-1604	19800229
SE 454696	B	19880524		
SE 454696	C	19880901		
FI 8000652	A	19800906	FI 1980-652	19800303

FI 70035	B	19860131			
FI 70035	C	19860912			
BR 8001263	A	19801104	BR 1980-1263		19800303
BE 882057	A1	19800904	BE 1980-199656		19800304
DK 8000913	A	19800906	DK 1980-913		19800304
NO 8000611	A	19800908	NO 1980-611		19800304
ZA 8001238	A	19810325	ZA 1980-1238		19800304
ES 489160	A1	19810401	ES 1980-489160		19800304
AT 8001193	A	19840915	AT 1980-1193		19800304
AT 377761	B	19850425			
CH 656138	A	19860613	CH 1980-1714		19800304
NL 8001316	A	19800909	NL 1980-1316		19800305
NL 174146	B	19831201			
NL 174146	C	19840501			
AU 8056161	A1	19800911	AU 1980-56161		19800305
AU 540061	B2	19841101			
DE 3008475	A1	19800918	DE 1980-3008475		19800305
DE 3008475	C2	19880526			
FR 2450858	A1	19801003	FR 1980-4999		19800305
FR 2450858	B1	19811016			
GB 2044284	A	19801015	GB 1980-7564		19800305
GB 2044284	B2	19830420			
JP 55144054	A2	19801110	JP 1980-27848		19800305
JP 59044323	B4	19841029			
US 4334072	A	19820608	US 1980-192152		19800929
AT 8401458	A	19861215	AT 1984-1458		19840503
AT 383544	B	19870710			
PRIORITY APPLN. INFO.:			US 1979-17764	A2	19790305
			US 1980-112500	A	19800116
			AT 1980-1193	A	19800304

OTHER SOURCE(S): MARPAT 96:21285

GI



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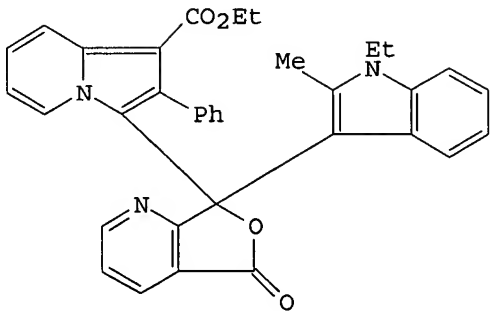


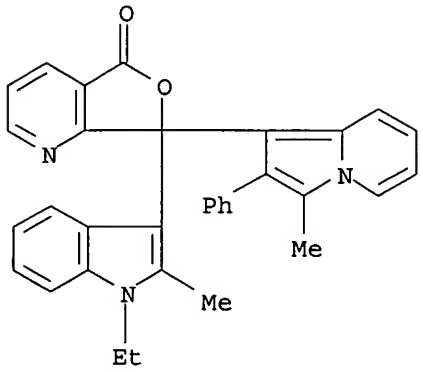
II

AB Chromogenic compds. (I) for pressure- or heat-sensitive mark-forming record systems are prepared, where Z = pyridine-2,3-diyl, R = substituted or unsubstituted p-aminophenyl, indol-3-yl, or 1-carbethoxy-2-phenylindolizin-3-yl (Q), and R1 = Q. I give red to green colors when in contact with acidic substrates. Thus, condensation of 3-carboxy-1-pyridinyl-1-ethyl-2-methylindol-3-yl ketone [69898-42-6] with 1-carboethoxy-2-phenylindolizine [39203-59-3] in Ac2O gave crystalline II [76949-97-8], which produced a blue color when applied to a record sheet material coated with Zn-modified phenolic resin. Numerous other chromogenic compds. were similarly prepared

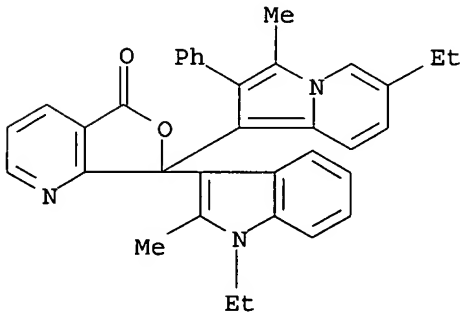
IT **76949-85-4P 76949-86-5P 76949-94-5P 76963-56-9P**

RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of, as color former for mark-forming record systems)

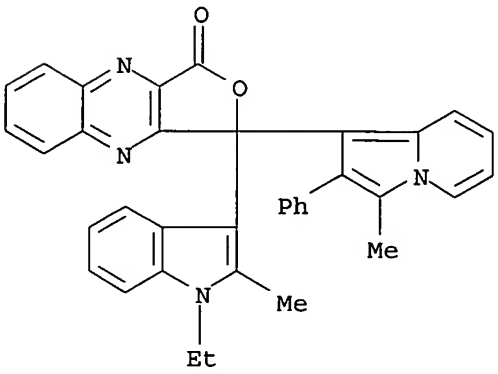
RN 76949-85-4 HCAPLUS
CN Furo[3,4-b]pyridin-5(7H)-one, 7-(1-ethyl-2-methyl-1H-indol-3-yl)-7-(3-methyl-2-phenyl-1-indolizinyl)- (9CI) (CA INDEX NAME)



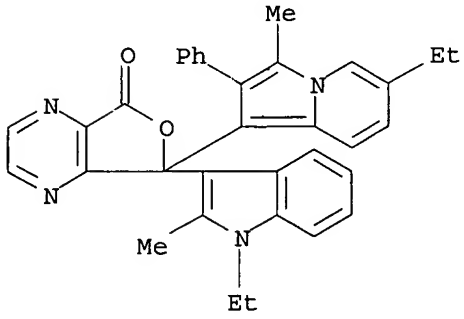
RN 76949-86-5 HCAPLUS
CN Furo[3,4-b]pyridin-5(7H)-one, 7-(1-ethyl-2-methyl-1H-indol-3-yl)-7-(6-ethyl-3-methyl-2-phenyl-1-indolizinyl)- (9CI) (CA INDEX NAME)



RN 76949-94-5 HCAPLUS
CN Furo[3,4-b]quinoxalin-1(3H)-one, 3-(1-ethyl-2-methyl-1H-indol-3-yl)-3-(3-methyl-2-phenyl-1-indolizinyl)- (9CI) (CA INDEX NAME)



RN 76963-56-9 HCAPLUS
CN Furo[3,4-b]pyrazin-5(7H)-one, 7-(1-ethyl-2-methyl-1H-indol-3-yl)-7-(6-ethyl-3-methyl-2-phenyl-1-indolizinyl)- (9CI) (CA INDEX NAME)

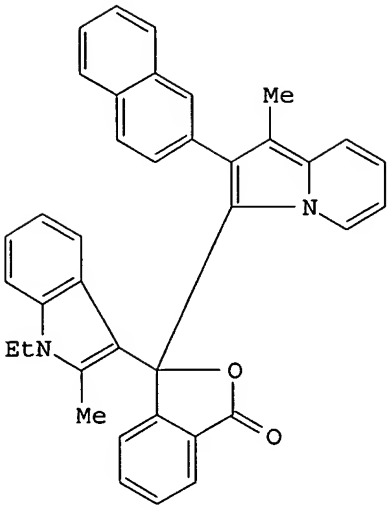


L52 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1981:463688 HCAPLUS
DOCUMENT NUMBER: 95:63688
TITLE: Chromogenic lactone compounds and their use in pressure-sensitive and thermosensitive recording materials
INVENTOR(S): Hoover, Troy Eugene; Farber, Sheldon; Becker, William Joseph
PATENT ASSIGNEE(S): Appleton Papers, Inc., USA
SOURCE: Ger. Offen., 98 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3008475	A1	19800918	DE 1980-3008475	19800305
DE 3008475	C2	19880526		
US 4232887	A	19801111	US 1979-17764	19790305
US 4275206	A	19810623	US 1980-112500	19800116

PRIORITY APPLN. INFO.: US 1979-17764 A 19790305
US 1980-112500 A 19800116

GI



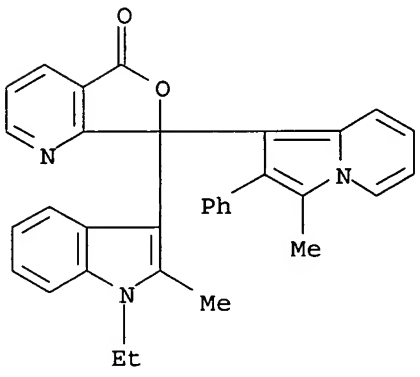
I

AB Chromogenic lactones containing an indolizinyl residue are prepared and used in pressure-sensitive recording materials, giving blue to green shades. Thus, a mixture of 1-ethyl-2-methylindol-3-yl 2-carboxyphenyl ketone [51389-84-5], 1-methyl-2-(2-naphthyl)indolizine [76949-58-1], and Ac2O was heated at 39° for 2 h to give I [76950-22-6], blue on a recording sheet coated with zinc-modified phenolic resin. Many similar lactones were prepared

IT **76949-85-4 76949-86-5 76949-94-5**
76950-17-9 76963-56-9 77011-33-7
RL: USES (Uses)
(color formers, for copying paper, manufacture of)

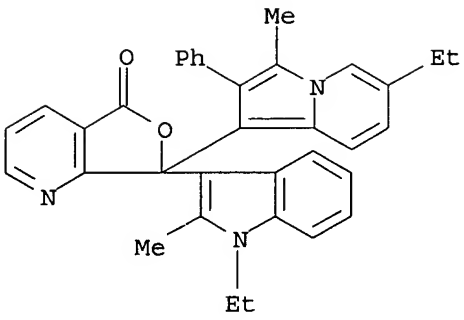
RN 76949-85-4 HCAPLUS

CN Furo[3,4-b]pyridin-5(7H)-one, 7-(1-ethyl-2-methyl-1H-indol-3-yl)-7-(3-methyl-2-phenyl-1-indolizinyl)- (9CI) (CA INDEX NAME)

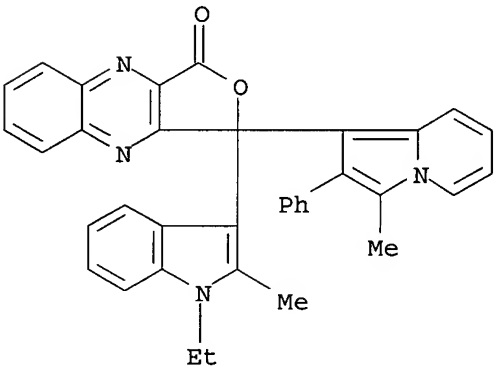


RN 76949-86-5 HCAPLUS

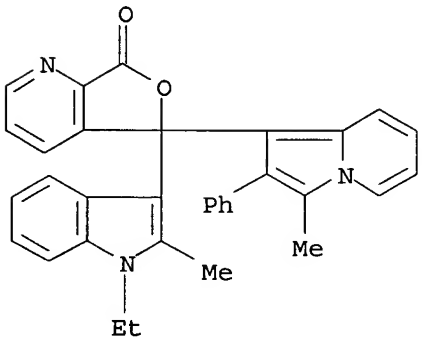
CN Furo[3,4-b]pyridin-5(7H)-one, 7-(1-ethyl-2-methyl-1H-indol-3-yl)-7-(6-ethyl-3-methyl-2-phenyl-1-indolizinyl)- (9CI) (CA INDEX NAME)



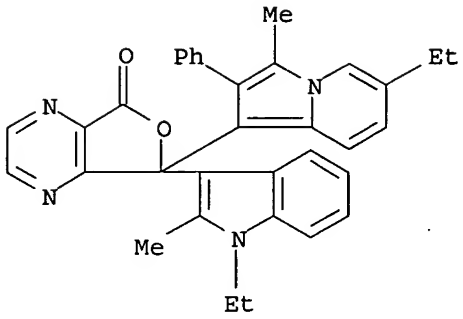
RN 76949-94-5 HCAPLUS
CN Furo[3,4-b]quinoxalin-1(3H)-one, 3-(1-ethyl-2-methyl-1H-indol-3-yl)-3-(3-methyl-2-phenyl-1-indolizinyl)- (9CI) (CA INDEX NAME)



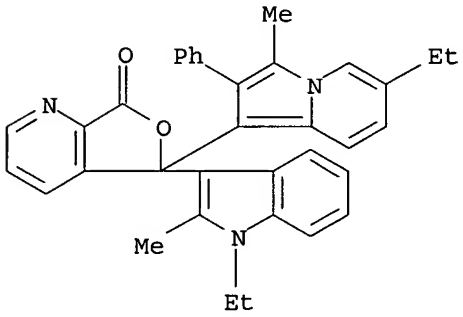
RN 76950-17-9 HCAPLUS
CN Furo[3,4-b]pyridin-7(5H)-one, 5-(1-ethyl-2-methyl-1H-indol-3-yl)-5-(3-methyl-2-phenyl-1-indolizinyl)- (9CI) (CA INDEX NAME)



RN 76963-56-9 HCAPLUS
CN Furo[3,4-b]pyrazin-5(7H)-one, 7-(1-ethyl-2-methyl-1H-indol-3-yl)-7-(6-ethyl-3-methyl-2-phenyl-1-indolizinyl)- (9CI) (CA INDEX NAME)



RN 77011-33-7 HCAPLUS
CN Furo[3,4-b]pyridin-7(5H)-one, 5-(1-ethyl-2-methyl-1H-indol-3-yl)-5-(6-ethyl-3-methyl-2-phenyl-1-indolizinyl)- (9CI) (CA INDEX NAME)



L52 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1981:425057 HCAPLUS
DOCUMENT NUMBER: 95:25057
TITLE: Chromogenic lactone compounds and their use in pressure-sensitive and thermosensitive recording materials
INVENTOR(S): Hoover, Troy Eugene; Farber, Sheldon; Becker, William Joseph
PATENT ASSIGNEE(S): Appleton Papers, Inc., USA
SOURCE: Ger. Offen., 67 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3008494	A1	19800918	DE 1980-3008494	19800305
DE 3008494	C2	19890406		
US 4242513	A	19801230	US 1979-17765	19790305
CA 1129855	A1	19820817	CA 1980-345054	19800205
SE 8001605	A	19800906	SE 1980-1605	19800229
SE 454274	B	19880418		
SE 454274	C	19880728		
FI 8000653	A	19800906	FI 1980-653	19800303
FI 69635	B	19851129		

FI 69635	C	19860310			
BR 8001247	A	19801104	BR 1980-1247		19800303
BE 882056	A1	19800904	BE 1980-199655		19800304
DK 8000912	A	19800906	DK 1980-912		19800304
NO 8000610	A	19800908	NO 1980-610		19800304
ZA 8001239	A	19810325	ZA 1980-1239		19800304
ES 489164	A1	19810401	ES 1980-489164		19800304
CH 656137	A	19860613	CH 1980-1713		19800304
AT 8001192	A	19880315	AT 1980-1192		19800304
AT 386833	B	19881025			
NL 8001317	A	19800909	NL 1980-1317		19800305
NL 174737	B	19840301			
NL 174737	C	19840801			
AU 8056162	A1	19800911	AU 1980-56162		19800305
AU 539167	B2	19840913			
FR 2450857	A1	19801003	FR 1980-4934		19800305
FR 2450857	B1	19811030			
GB 2044285	A	19801015	GB 1980-7565		19800305
GB 2044285	B2	19830420			
JP 55139455	A2	19801031	JP 1980-27847		19800305
JP 63020868	B4	19880430			
JP 58164642	A2	19830929	JP 1982-212045		19821202
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			JP 1980-27847		19800305

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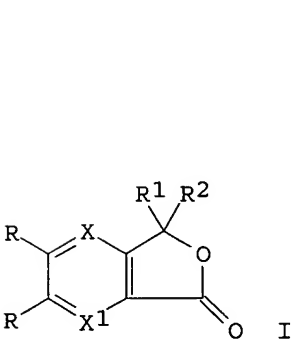

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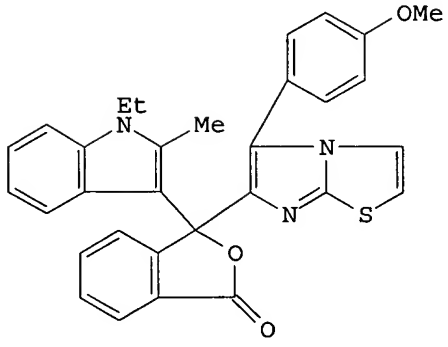


II

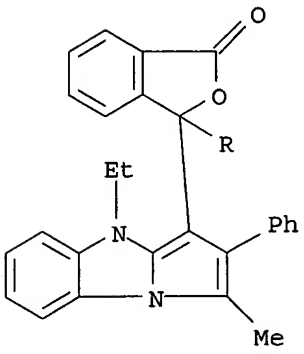
AB One hundred eleven chromogenic lactones I [R = H or RR = (CH:CH)2 (RR, R1 or R2 may be substituted); R1 = p-aminophenyl or benzimidazol-3-yl; R2 = a heterocyclic moiety comprised of 2 fused aromatic rings containing a N atom in a condensation-reactive position; X = X1 = CH or N, or X = N, X1 = CH] were prepared, which could be encapsulated to form pressure- and thermo-sensitive copying materials which could be activated by acidic clays or resins to provide uniform light-stable coloration. Thus, 1.23 g 6-(p-methoxyphenyl)imidazo[2,1-b]thiazole heated 3 h at 50-5° with 0.92 g 2-[(1-ethyl-2-methylindol-3-yl)carbonyl]benzoic acid in 30 mL Ac2O gave 2.1 g II, which provided, with acid clay, a purple recording material.

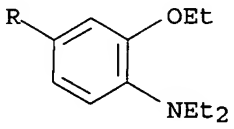
IT **76818-29-6P 76818-34-3P 76818-40-1P 76818-46-7P 76818-52-5P 76818-56-9P 76818-59-2P 76818-62-7P 76818-65-0P 76818-87-6P 76823-53-5P 76840-24-9P 76840-38-5P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and chromogenic property of)

RN 76818-29-6 HCAPLUS

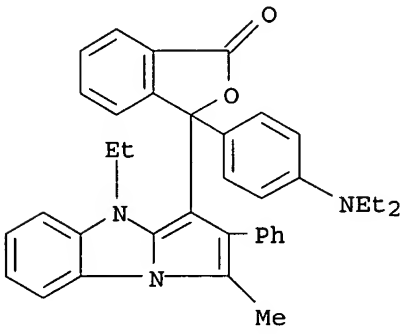
CN 1(3H)-Isobenzofuranone, 3-[4-(diethylamino)-3-ethoxyphenyl]-3-(4-ethyl-1-methyl-2-phenyl-4H-pyrrolo[1,2-a]benzimidazol-3-yl)- (9CI) (CA INDEX NAME)





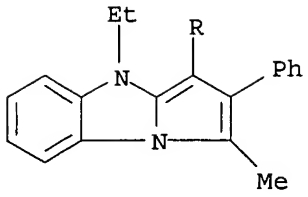
RN 76818-34-3 HCAPLUS

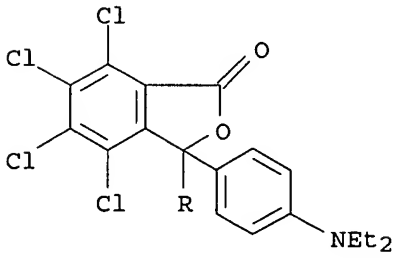
CN 1(3H)-Isobenzofuranone, 3-[4-(diethylamino)phenyl]-3-(4-ethyl-1-methyl-2-phenyl-4H-pyrrolo[1,2-a]benzimidazol-3-yl)- (9CI) (CA INDEX NAME)



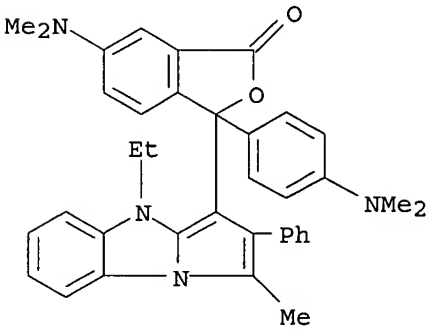
RN 76818-40-1 HCAPLUS

CN 1(3H)-Isobenzofuranone, 4,5,6,7-tetrachloro-3-[4-(diethylamino)phenyl]-3-(4-ethyl-1-methyl-2-phenyl-4H-pyrrolo[1,2-a]benzimidazol-3-yl)- (9CI) (CA INDEX NAME)

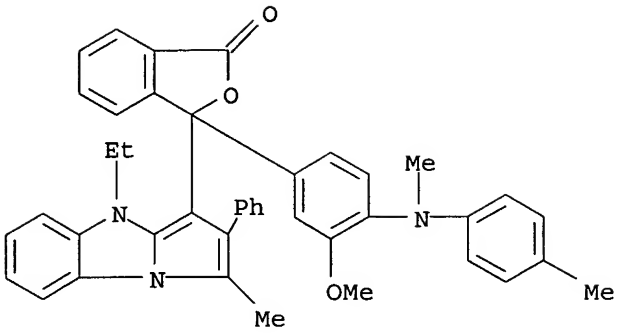




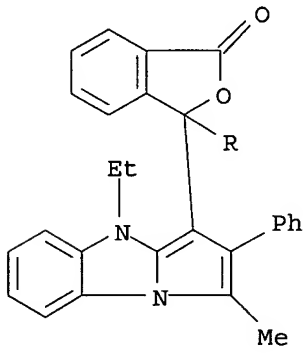
RN 76818-46-7 HCAPLUS
CN 1(3H)-Isobenzofuranone, 6-(dimethylamino)-3-[4-(dimethylamino)phenyl]-3-(4-ethyl-1-methyl-2-phenyl-4H-pyrrolo[1,2-a]benzimidazol-3-yl)- (9CI) (CA INDEX NAME)

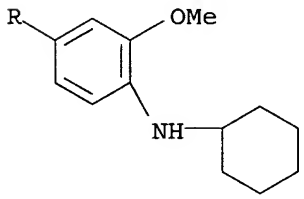


RN 76818-52-5 HCAPLUS
CN 1(3H)-Isobenzofuranone, 3-(4-ethyl-1-methyl-2-phenyl-4H-pyrrolo[1,2-a]benzimidazol-3-yl)-3-[3-methoxy-4-[methyl(4-methylphenyl)amino]phenyl]- (9CI) (CA INDEX NAME)

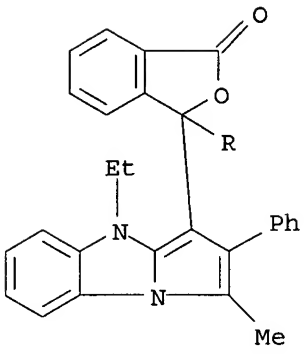


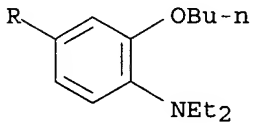
RN 76818-56-9 HCAPLUS
CN 1(3H)-Isobenzofuranone, 3-[4-(cyclohexylamino)-3-methoxyphenyl]-3-(4-ethyl-1-methyl-2-phenyl-4H-pyrrolo[1,2-a]benzimidazol-3-yl)- (9CI) (CA INDEX NAME)



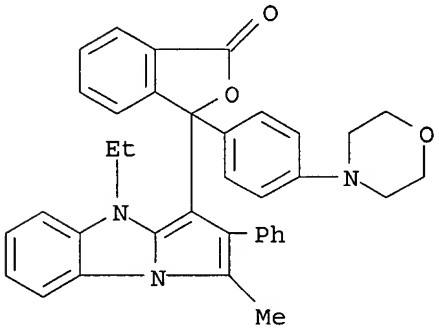


RN 76818-59-2 HCAPLUS
CN 1(3H)-Isobenzofuranone, 3-[3-butoxy-4-(diethylamino)phenyl]-3-(4-ethyl-1-methyl-2-phenyl-4H-pyrrolo[1,2-a]benzimidazol-3-yl)- (9CI) (CA INDEX NAME)

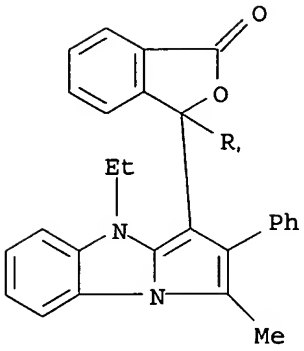


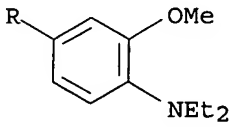


RN 76818-62-7 HCAPLUS
CN 1(3H)-Isobenzofuranone, 3-(4-ethyl-1-methyl-2-phenyl-4H-pyrrolo[1,2-a]benzimidazol-3-yl)-3-[4-(4-morpholinyl)phenyl]- (9CI) (CA INDEX NAME)



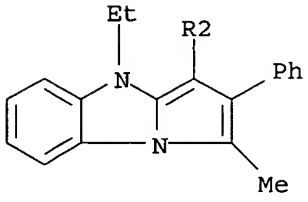
RN 76818-65-0 HCAPLUS
CN 1(3H)-Isobenzofuranone, 3-[4-(diethylamino)-3-methoxyphenyl]-3-(4-ethyl-1-methyl-2-phenyl-4H-pyrrolo[1,2-a]benzimidazol-3-yl)- (9CI) (CA INDEX NAME)

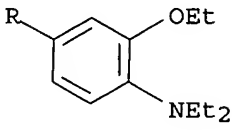




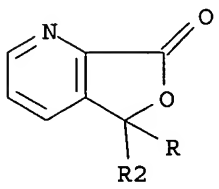
RN 76818-87-6 HCAPLUS
CN Furo[3,4-b]pyridin-7(5H)-one, 5-[4-(diethylamino)-3-ethoxyphenyl]-5-(4-ethyl-1-methyl-2-phenyl-4H-pyrrolo[1,2-a]benzimidazol-3-yl)- (9CI) (CA INDEX NAME)

PAGE 1-A

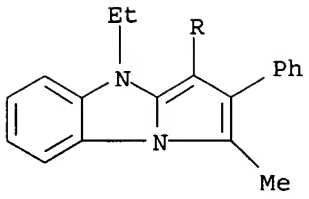


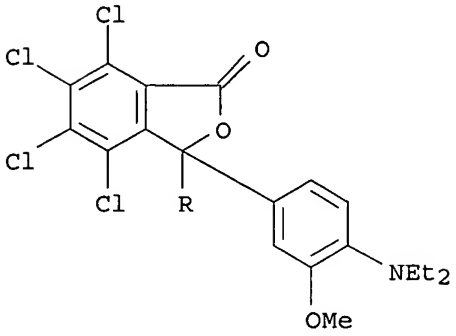


PAGE 2-A



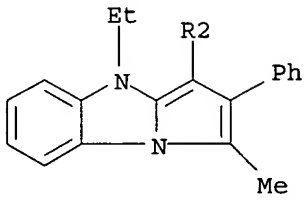
RN 76823-53-5 HCAPLUS
CN 1(3H)-Isobenzofuranone, 4,5,6,7-tetrachloro-3-[4-(diethylamino)-3-methoxyphenyl]-3-(4-ethyl-1-methyl-2-phenyl-4H-pyrrolo[1,2-a]benzimidazol-3-yl)- (9CI) (CA INDEX NAME)

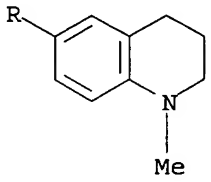




RN 76840-24-9 HCAPLUS
CN Furo[3,4-b]pyridin-7(5H)-one, 5-(4-ethyl-1-methyl-2-phenyl-4H-pyrrolo[1,2-a]benzimidazol-3-yl)-5-(1,2,3,4-tetrahydro-1-methyl-6-quinolinyl)- (9CI) (CA INDEX NAME)

PAGE 1-A





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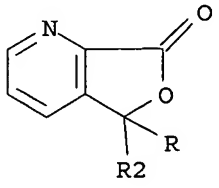
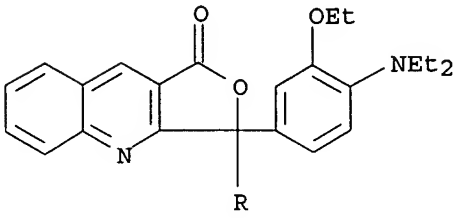
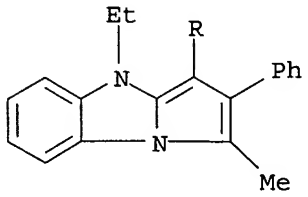
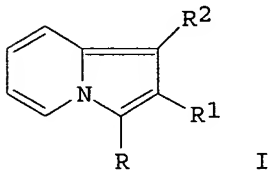


RN 76840-38-5 HCAPLUS
CN Furo[3,4-b]quinolin-1(3H)-one, 3-[4-(diethylamino)-3-ethoxyphenyl]-3-(4-ethyl-1-methyl-2-phenyl-4H-pyrrolo[1,2-a]benzimidazol-3-yl)- (9CI) (CA INDEX NAME)





L52 ANSWER 7 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1978:89581 HCAPLUS
DOCUMENT NUMBER: 88:89581
TITLE: Hetarylation of indolizines
AUTHOR(S): Sheinkman, A. K.; Zherebchenko, V. I.; Stupnikova, T. V.; Portsel, E.; Klyuev, N. A.
CORPORATE SOURCE: Dnepropetr. Inzh. Stroit. Inst., Dnepropetrovsk, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1977), (11), 1510-14
CODEN: KGSSAQ; ISSN: 0132-6244
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 88:89581
GI



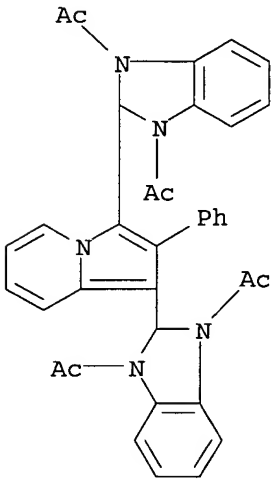
I

AB Hetarylation of 2-methylindolizine I (R = R2 = H, R1 = Me) by quinoline and isoquinoline in the presence of BzCl gave in addition to I R = PhCO, R1 = Me, R2 = H), 60 and 33% I (R = 1-benzoyl-1,2-dihydro-2-quinolyl, 1-benzoyl-1,2-dihydro-2-isoquinolyl). Hetarylations with benzimidazole and imidazole in the presence of Ac2O gave 55% I (R = R2 = 1,3-diacetyl-4-imidazolin-2-yl, R1 = Me) and 93 and 30% I (R = R2 = 1,3-diacetylbenzimidazolin-2-yl, R1 = Me, Ph). Subsequent treatment of the imidazoline and benzimidazoline derivs. gave the corresponding

imidazolium and benzimidazolium perchlorates. Similar hetarylations were carried out with benzoxazole and acridine.

IT **65592-74-7P 65592-77-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

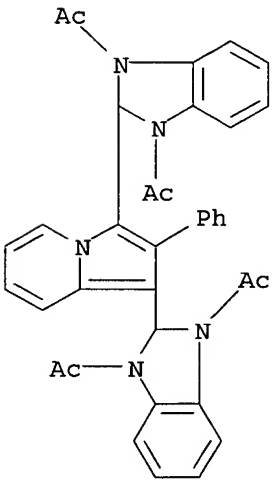
RN 65592-74-7 HCAPLUS
CN 1H-Benzimidazole, 2,2'-(2-phenyl-1,3-indolizinediyl)bis[1,3-diacetyl-2,3-dihydro- (9CI) (CA INDEX NAME)



RN 65592-77-0 HCAPLUS
CN 1H-Benzimidazolium, 2,2'-(2-phenyl-1,3-indolizinediyl)bis[1,3-diacetyl-, diperchlorate (9CI) (CA INDEX NAME)

CM 1

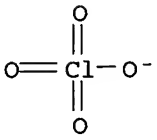
CRN 65592-76-9
CMF C36 H29 N5 O4



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

CM 2

CRN 14797-73-0
CMF Cl O4



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